

AWIPS SOFTWARE INSTALLATION NOTE 106

Office of Central Processing

W/CP: RH

SUBJECT: **AWIPS Release 16.2.2**

PURPOSE: Provides installation instructions and related information for Advanced Weather Interactive Processing System (AWIPS) Software Release 16.2.2.

SITES AFFECTED: All Weather Forecast Offices (WFO), River Forecast Center (RFC), Regional Headquarters and National Centers for Environmental Prediction (NCEP).

AUTHORIZATION: The authority for this note is Request for Change (RC) 15098.

VERIFICATION STATEMENT: This procedure was tested and verified on test platforms at the NWS National Headquarters in Silver Spring, MD (NMTR, NHOR), and the following Regional Headquarters and operational platforms:

- Central Region Headquarters, Kansas City, MO (BCQ)
- Eastern Region Headquarters, Bohemia, NY (VUY)
- Alaska Region Headquarters, Anchorage, AK (VRH)
- WFO, Missoula, MT (MSO)
- WFO, Burlington, VT (BTV)
- WFO, Barrigada, Guam (GUM)
- LMRFC, Slidell, LA (ORN)
- WFO, Elko, NV (LKN)
- WFO, Sterling, VA (LWX)
- WFO, Des Moines, IA (DMX)
- WFO, Spokane, WA (OTX)
- WFO, Blacksburg, VA (RNK)
- WFO, Houston/Galveston, TX (HGX)
- WFO, Pittsburgh, PA (PBZ)

ESTIMATED COMPLETION DATE: All sites should complete installation by November 10, 2016. The installation date must be scheduled on the NWS AWIPS Google Calendar.

TIME REQUIRED: Approximately 2 hours

ACCOMPLISHED BY: Electronics System Analyst (ESA) or their designee

EQUIPMENT AFFECTED: AWIPS

SPARES AFFECTED: None

PARTS/MATERIALS REQUIRED: None

SOURCE OF PARTS/MATERIALS: Raytheon

DISPOSITION OF REMOVED PARTS/MATERIALS: Not applicable (N/A)

TOOLS AND TEST EQUIPMENT REQUIRED: None

DOCUMENTS AFFECTED:	File this note in EHB-13, Section 3.1.
SUMMARY OF CHANGES:	N/A
PROCEDURE:	These instructions are written for both RFC and WFO systems. As a result, some instructions may only be applicable to RFC systems, WFO systems or individual sites. Each step or section is clearly marked. All steps are required unless otherwise directed in the instructions.
TECHNICAL ASSISTANCE:	For questions or problems pertaining to this note, contact Network Control Facility (NCF) at (301) 713-9344.
REPORTING INSTRUCTIONS:	Report the completed modification using the Engineering Management Reporting System (EMRS) according to the instructions in EHB-4, Maintenance Documentation , Part 4, and Appendix F. Include the following information on the EMRS report: Maintenance Description (block 5): AWIPS Release 16.2.2 Equipment Code (block 7): AWIPS Serial Number (block 8): 001 Maintenance Comments (block 15): Installed AWIPS Release OB16.2.2 I.A.W. AWIPS Software Installation Note 106 Mod No. (block 17a): S106 A sample EMRS report is provided as Attachment D.

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Chief, Services Branch

Attachment A – AWIPS II Installation Instructions
Attachment B – Rebooting RP Servers
Attachment C – DCS and DR Corrected in OB16.2.2
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Acronyms and Abbreviations Used in This Procedure

AI	Admin Interface
AIDE	Advanced Intrusion Detection Environment
ARD	AWIPS Remote Display
ASOS	Automated Surface Observing System
AWIPS	Advanced Weather Interactive Processing System
BMH	Broadcast Message Handler
CAVE	Common AWIPS Visualization Environment
CHPS	Community Hydrologic Prediction System
CONUS	Continental United States
CWSU	Center Weather Service Units
DAS	Direct Attached Storage
DCS	Development Change Specifications
DR	Discrepancy Reports
DOH	Development and Operations Hydrologist
EDEX	Environment Data Exchange
EMRS	Engineering Management Reporting System
ESA	Electronics System Analyst
FAA	Federal Aviation Administration
FSS	Forecast Shell Server
GB	Gigabytes
GFE	Gridded Forecast Editor
HLS	Hurricane Local Statement
JMS	Java Messaging System
KVM	Keyboard Video Mouse
LAPS	Local Analysis and Prediction System
LDAD	Local Data Acquisition and Dissemination
LDM	Local Data Manager
MAPS	Mesoscale Analysis and Prediction System
MC	Master Controller
MSAS	MAPS Surface Analysis System
NCEP	National Centers for Environmental Prediction
NCF	Network Control Facility
NIC	NwsInits Config
NWRWAVES	NOAA Weather Radio With All-Hazards VTEC Enhanced Software

RC	Request for Change
RFC	River Forecast Center
RP/REP	River Ensemble Processor
SAIDS	Satellite Archive Image Delivery System
WAN	Wide Area Network
WFO	Weather Forecast Office

ATTACHMENT A AWIPS II Installation Instructions

A.1 General Information

The OB16.2.2 installation includes corrections to Development Change Specifications (DCS) and Discrepancy Reports (DR), which are listed in Attachment C. The entire installation generally takes about 2 hours to complete. Users need to log off the systems during the install.

A.1.1 Prerequisites

AWIPS Migration (II) Release OB16.2.1 must be installed.

Sites and their backup sites need to update to the latest version (3.0.1 or later) of NwsInitsConfig (NIC) and upload their configuration to the central server before installing 16.2.2.

A.1.2 Pre-Installation Activities

The installation must be scheduled on the NWS AWIPS Google Calendar to ensure installation support availability. The pre-installation procedures listed in Section A.2 should be performed several days prior to the scheduled installation. Sites should review the OB16.2.2 Release Notes (https://www.ops1.nws.noaa.gov/Secure/awips_software.htm), and the Living Release Notes (<https://docs.google.com/spreadsheets/d/1wv3ygGxf19g9LTsxyNtwipkGhoCDqxuPor3dwbL-lW8/edit?pli=1#gid=831868547>) to prepare for the install.

A.2 Pre-Installation Procedures

Complete Section A.2.1 through Section A.2.8 before beginning the core installation in Section A.3.

A.2.1 Coordinate Installation Date

Coordinate the installation with backup sites, uplink sites, hub site pairs, and Center Weather Service Units (CWSU) as applicable.

1. AWIPS will be unavailable for operational use during the installation. Coordinate with backup sites to arrange for service backup as applicable.
2. Schedule installation on the NWS AWIPS Google Calendar.
3. Weather Wire uplink sites must ensure that the backup Weather Wire site(s) are not upgrading to this release concurrently. Contact the AWIPS Regional Focal Point to request assistance with this coordination.
4. During the install, Satellite Archive Image Delivery System (SAIDS) will not be available to the Federal Aviation Administration (FAA), and sites must ensure that the Automated Surface Observing Systems (ASOS) dial-in should switch to backup sites.
5. Wide area network (WAN) hub sites must ensure that the corresponding hub site pair is not concurrently performing similar upgrades. Hub site pairs are **BOX/CTP**, **EAX/TSA**, **MPX/ILN**, **FFC/LIX**, **STO/PQR** and **SLC/FWD**. Contact the AWIPS Regional Focal Point to request assistance with this coordination.
6. Sites with connections to CWSU must coordinate the installation of this release with those sites, since there will be a disconnection during the release installation. Those sites should plan the update for AWIPS Remote Display (ARD) on the same date as 16.2.2 install.

A.2.2 Check fsck

On the Linux Data Server **DX1** as user `root`, run:

```
tune2fs -l /dev/mapper/vg_aiddb-awipsiiddb | grep "Next check"
```

If the date returned is in the past or will be in the past by the date of the install, then a package swap will force an **fsck** on the large database volume on the Direct Attached Storage (DAS) before the `a2dx1apps` package will restart. This can take around 20 minutes to perform before the package can swap. That means when the post-security patch install reboots are performed, `a2dx1apps` can take an additional 20 minutes to start on **DX2**. Rebooting **DX2** while the **fsck** is running is NOT recommended.

NOTE: If the volume needs or is close to needing an **fsck** prior to the install, and if the site prefers no downtime at this time, the site can complete the **fsck** before the main install step in Section A.3.1.

If the volume needs or is close to needing an **fsck** prior to the install, then coordinate downtime with the operations staff for a package halt (`hb_halt a2dx1apps`) and restart (`hb_run a2dx1apps`) to complete the **fsck**.

A.2.3 Disable Site PX1/PX2 Cron

At least 2 hours before the install, but preferably the night before, disable the `a2SITEpx1cron` and `a2SITEpx2cron` to allow all Common AWIPS Visualization Environment (CAVE) crons time to complete before the install. This will prevent unnecessary killing of lingering cron/CAVE processes during the installation process, which could lead to corrupted data. Re-enabling the cron after the install is not necessary, as it will be restarted as part of the reboots in Section A.3.6. Run the following commands. Type:

```
ssh px1f "rm -f /etc/cron.d/a2SITEpx1cron; service crond
restart"                (Execute this command in one line)
```

```
ssh px2f "rm -f /etc/cron.d/a2SITEpx2cron; service crond
restart"                (Execute this command in one line)
```

If the site has `gfeClient` cron jobs elsewhere, those cron jobs need to be disabled too.

NOTE: Renaming the cron WILL NOT WORK.

A.2.4 Verify AWIPS II Packages are Running on the Primary Servers

Log on to **DX1/2**, **CPSBN1/2** and **PX1/2** and run `hb_stat` to verify that `a2dx1apps`, `a2dx2apps`, `a2cp1apps`, `a2cp2apps` (applicable only to sites that are running Data Delivery), `a2px1apps` and `a2px2apps` are running on the primary servers. If they are not running on the primary servers, use `hb_swap` to move the packages to the primary servers.

A.2.5 (RFC only) Verify RP_SERVERS and CHPS_SERVERS are Set Up Correctly

Check RP_SERVERS and CHPS_SERVERS to make sure they are set up correctly. From **DX1**, type:

```
echo $RP_SERVERS
echo $CHPS_SERVERS
```

Output should be rp1-lll, rp2-lll, rp3-lll, and chps1-lll, chps2-lll, ..., chps9-lll.
(where LLL is the localization site identification [ID])

A.2.6 Verify LDM pqact.conf is Up to Date (VRH, GUM and HFO can skip this step)

The config_awips2.sh for the Local Data Manager (LDM) is run from **DX1** or **DX2**. The script configures LDM pqact.conf on both **CPSBN1** and **CPSBN2**. Please ensure that /usr/local/ldm/etc/pqact.conf.lll is up to date on **DX1** and **DX2** prior to running the script. It is recommended to make a backup copy of pqact.conf.lll from **DX1**.

(where LLL is the localization site ID)

A.2.7 Verify Disk Space on DX2 /var

Ensure there are at least 2.3 gigabytes (GB) of free disk space on **DX2**, this is required for database and pypies server updates in the future.

If **df** command shows that /var has less than 2.3 GB free space, then clean disk spaces (recommend looking at root's e-mail first, then log files if needed).

Useful commands:

```
df -h /var                (Finds available space on /var)
find /var -size +20M      (Finds files larger than 20 MB)
```

Contact NCF if the site needs support on cleaning disk spaces.

A.2.8 Backup Site-Level baseRadarMenu.xml if Necessary

DCS 18425 introduces an updated base-level baseRadarMenu.xml for the creation of regional and national radar mosaics for the entire Continental United States (CONUS). Any existing site-level overrides of baseRadarMenu.xml may cause this new mosaic feature to not work properly. To avoid this problem, backup any site-level overrides prior to install and remove baseRadarMenu.xml from the site-level directory. After the install is complete, there will be a step to re-merge any existing site-level baseRadarMenu.xml code into the new base-level file.

(Access the file baseRadarMenu.xml from the localization perspective:

```
CAVE -> Menus -> radar -> baseRadarMenu.xml)
```

A.3 Installation Procedure for the OB16.2.2 Software Upgrade

This section is the core installation. Complete each step as directed.

A.3.1 Launch AIDE Check

As user `root` on **DX1**, launch the Advanced Intrusion Detection Environment (AIDE) check. Type:

```
cd /data/fxa/INSTALL/awips2/scripts
```

```
./aideCheck.sh (Takes about 15 minutes)
```

If the script takes longer than 20 minutes to run, contact NCF to verify the progress of the AIDE check.

A.3.2 Notify NCF

CAUTION

Before starting the installation script, ask operations staff to terminate all D2D/Gridded Forecast Editor (GFE) sessions and log out of the LX and XT workstations.

Open a trouble ticket with NCF by calling (301) 713-9344. If problems are encountered during the install, contact NCF and ask for OB16.2.2 install support.

CAUTION

DO NOT use Ctrl+C for ANY of the steps during the installation.

A.3.3 Launch AWIPS Installs

NOTE: The `master.sh` script is new in 16.2.2. This script launches all device installs in parallel and returns to prompt once all installs are complete. It reports the status of each installer as it completes. All scripts still automatically log to `/data/fxa/INSTALL/a2logs/16.2.2-#` (where # is the delta number). At the end of each script, the script will grep for common error messages. If it finds one, the message `Installation completed on <hostname>, but with errors. Please contact the NCF. will display.` If this happens, contact NCF before proceeding; otherwise, continue.

1. As user `root` on **DX1**, launch all device installs. Still in the directory `/data/fxa/INSTALL/awips2/scripts`, type:

```
./master.sh update (Takes about 10-20 minutes)
```

(Answer **y** to the question `Do you wish to proceed?`)

NOTE: Do not continue until `Update Finished!` appears followed by the date, and the command line prompt returns. Do not hit **Ctrl+C** to exit out of the script. If any red error messages appear, contact NCF with the details about which installs failed before proceeding.

2. (VRH only) As user `root` on **DX1**, install LDM updates. Still in the directory `/data/fxa/INSTALL/awips2/scripts`, type:


```
./ldmInstall.sh update
/data/fxa/sdc/config_awips2.sh ldm LLL      (Takes about 2 minutes)
(where LLL is the localization site ID)
```
3. (VRH only) As user `root` on **DX2**, install LDM updates. Still in the directory `/data/fxa/INSTALL/awips2/scripts`, type:


```
./ldmInstall.sh update
/data/fxa/sdc/config_awips2.sh ldm LLL      (Takes about 2 minutes)
(where LLL is the localization site ID)
exit
```
4. Configure LDM `pqact.conf` (VRH can skip this step).

NOTE: The `config_awips2.sh` for LDM is running from **DX1** or **DX2**. The script configures LDM `pqact.conf` on both **CPSBN1** and **CPSBN2**. Ensure that `~ldm/etc/pqact.conf.l11` (where `l11` is the site ID) is up to date on **DX1** and **DX2** prior to running the script.

As user `root` on **DX1**, type:

```
/data/fxa/sdc/config_awips2.sh ldm LLL      (Takes about 2 minutes)
(where LLL is the localization site ID)
(The Hangup (core dumped) message can be ignored.)
```

A.3.4 Apply Rehost Code Updates

As user `root` on **DX1**, launch the rehost code update script. Type:

```
/data/fxa/INSTALL/awips2/REHOST_CODE/rehost_16.2.2.sh
(Takes about 3 minutes)
```

(The `stty: standard input: Invalid argument` message can be ignored.)

If the script takes longer than 10 minutes to run, please contact NCF.

A.3.5 Apply Security Patches

1. As user `root` on **DX1**, run the security patch install script. Type:

```
/data/fxa/INSTALL/rhel6/scripts/kickoff_patch_install.sh
(Takes about 4 minutes)
```

2. Wait a few minutes for the patch installs to start on each device. Type:

```
/data/fxa/INSTALL/rhel6/scripts/monitor_sec_patches.sh
```

NOTE: The scripts output the status of the installs on all machines. If the install has not completed on all devices, wait a few minutes and rerun the scripts to check the status again. The security patch install log files are stored under `dx1:/data/fxa/INSTALL/rhel6/logs`. If the output indicates failure for any device, contact NCF before proceeding.

A.3.6 Reboot All Devices and Apply New Kernel

CAUTION

DO NOT proceed until all machines have completed installing security patches!

A.3.6.1 (RFC Systems only) Reboot RP Servers

Reboot the River Ensemble Processor (RP/REP) at all applicable RFC sites. Refer to Attachment B for instructions.

A.3.6.2 Reboot All Devices (DX, PX, LX, XT, CPSBN, LX, and AX) to Apply New Kernel

1. As user `root` on **DX2** from the keyboard video mouse (KVM) monitor (NOT from an **LX** workstation terminal), type:

```
/data/fxa/INSTALL/awips2/scripts/platformReboot.sh --all
```

This begins reboots on every machine except for **DX2** and **PX2**.

2. Wait until **DX1**, **DX3**, **DX4**, and **PX1** servers have been rebooted. To check the servers are rebooted, use the `ssh` command to connect to each of the servers.
3. As user `root` on **DX2**, type:

```
reboot
```

As user `root` on **PX2**, type:

```
reboot
```

After **DX2** server has been booted up, swap the **DX2** package back.

As user `root` on **DX2**, type:

```
hb_swap a2dx2apps
```

After **PX2** server has been booted up, swap the **PX2** package back.

As user `root` on **PX2**, type:

```
hb_swap a2px2apps
```

4. (Sites that utilize the `asyncScheduler` only) Verify asynchronous functionality.

If a site utilizes the `asyncScheduler`, check the `asyncScheduler` log on **PX1** in

```
/data/logs/fxa/<today's date> to ensure everything is correct. There may also be other logs in the same directory for SAIDS or other async functions.
```

A.3.6.3 Check All Devices to Make Sure the New Kernel is Running

As user `root` on **DX1**, launch Kernel Check script. Type:

```
/data/fxa/INSTALL/awips2/scripts/checkKernel.sh
```

NOTE: Output after each host should be highlighted in green, and the new kernel number is 2.6.32-642.1.1. If any return with a red value, or an error message such as `No route to host` appears, investigate the patch install logs, check the machine to see why it did not reboot properly, or contact NCF for assistance.

A.3.6.4 Contact NCF to Re-initialize the AIDE Database

Contact NCF install support engineer and request that they re-initialize the AIDE database at this time. The installation can continue while NCF performs this action.

A.3.6.5 Verify the Packages are Running on the Primary Servers

As user `root` on **DX1**, type:

```
hb_stat  
ssh px1 "hb_stat"  
ssh cpsbn1 "hb_stat"
```

If any packages are listed on the failover devices, log on to the device where it should be running and type the command:

```
hb_swap a2XXXapps
```

(where `xxx` is the host package names, such as **dx1**, **cp1**, etc.)

A.3.6.6 Check Heartbeat and LDAD Servers

1. Log on to the Local Data Acquisition and Dissemination (LDAD) server **LS2** as `root` to verify packages are running on **LS2**. Type:

```
ssh ls2  
hb_stat
```

2. If LDM does not start automatically on **LS2**, type the following commands to restart LDM.

From **LS2** as `root`, type:

```
su - ldm  
ldmadmin stop  
ldmadmin delqueue  
ldmadmin clean  
ldmadmin mkqueue  
ldmadmin start  
exit  
exit
```

(Returns back to **DX1**)

A.3.7 Start Environment Data Exchange (EDEX)

1. As user `root` on **DX1**, update configuration files. Type:

```
ssh dx3
```

```
/data/fxa/sdc/config_awips2.sh edex LLL
```

(where `LLL` is the localization site ID)

```
/data/fxa/sdc/config_awips2.sh cave LLL (NCEP sites should skip this step)
```

(The `FAILED: /awips2/edex/bin: is a directory.` message can be ignored.)

(The `FAILED: copy setup.env to CPSBN1 and CPSBN2.` message can be ignored.)

2. (**ALR** only) Update **SJU** EDEX configuration files. Type:

```
ssh px1
```

```
/data/fxa/sdc/config_awips2.sh edex SJU
```

(Answer `y` to the question `Would you like to configure setup.env to SJU?`)

```
/data/fxa/sdc/config_awips2.sh cave SJU
```

(The `FAILED: /awips2/edex/bin: is a directory.` message can be ignored.)

(The `FAILED: copy setup.env to CPSBN1 and CPSBN2.` message can be ignored.)

```
exit (Returns back to DX3)
```

3. Start **DX3** EDEX. Still on **DX3**, type:

```
service edex_camel start
```

```
tail -f /awips2/edex/logs/edex-ingest-<yyyymmdd>.log | grep  
"now operational" (Execute this command in one line)
```

Press **Ctrl+C** to quit out of the tail once the service becomes operational.

NOTE: If no `now operational` prints out from the previous command line after a few minutes, try the following:

```
grep "now operational" /awips2/edex/logs/edex-ingest-  
<yyyymmdd>.log (Execute this command in one line)
```

Contact NCF if key words `now operational` could not be found in the log file.

4. Start EDEX on the remaining servers. While still on **DX3**, type:

```
for host in dx4 {host5} {host6}
```

```
do
```

```
ssh -q $host service edex_camel start
```

```
done
```

(where `{host5}` and `{host6}` are **dx5** and **dx6** for NCEP sites and **px3** and **px4** for **AFC** and **VRH**)

NOTE: For sites without **host5** and **host6**, the following command can be used to start EDEX server on **DX4**:

```
ssh -q dx4 service edex_camel start
```

Tail edex-ingest log for key words `now operational` on each server (**dx4**, **host5** and **host6**) to confirm EDEX server is up and running.

5. (BMH sites and **ALR** only) Start Broadcast Message Handler (BMH) EDEX on **PX1** and **PX2**.

While still on **DX3**, type:

```
for host in px1 px2
do
ssh -q $host service edex_camel start bmh
done
```

A.3.8 (WFOs & RFCs only) Launch LAPS/MSAS Installs

As user `root` on **DX1**, launch the Local Analysis and Prediction System (LAPS)/Mesoscale Analysis and Prediction System (MAPS) Surface Analysis System (MSAS) install scripts. Type:

```
/data/fxa/INSTALL/awips2/scripts/gsdInstall.sh
```

Once the script has finished running on **PX1**, **PX2**, and **DX3**, the installation is completed,

A.3.9 Notify NCF

Call NCF at (301) 713-9344 to confirm the AIDE database re-initialization has finished and notify that OB16.2.2 installation is complete. Users can log back on the system and launch CAVE.

A.4 Post Install

A.4.1 NIC Post-Install Setup

After installing OB16.2.2, the site needs to rerun the NIC install script, reactivate GFE and upload the GFE configuration to the central server.

A.4.2 (For Sites with CWSU only) Update CWSU ARD

After installing OB16.2.2, sites with connections to CWSU must update for ARD on the same date. Please use the following build upgrade procedures:

<https://docs.google.com/document/d/1Ue0sXpyen6nLYZNDekzauFYqWC53Mti6Gr2fwbsleyU/edit>

A.4.3 Re-merge Backed-Up Site-Level baseRadarMenu.xml if Necessary

If any sites have modified their site-level `baseRadarMenu.xml` file, re-merge in changes to the base-level file. Remove the site-level override after the install (if not done already).

(Access the file `baseRadarMenu.xml` from the localization perspective:

```
CAVE -> Menus -> radar -> baseRadarMenu.xml)
```

A.4.4 (HFON, GUM, LOX, MTR SGX and PBP Only) Update NWRWAVES

To account for the different needs for the Pacific Sites, NWRWAVES (NOAA Weather Radio With All-Hazards VTEC Enhanced Software) has been updated and baselined in 16.2.2 (DR19297: NWRWAVES needs to be rolled back to 14.3.1 for HFON, GUM, others for the HLS issuance). Two files (`nwrwaves_HLS.csh` and `nwrwaves_HLS.tcl`) have been delivered to ensure the HLS (Hurricane Local Statement) products make to NWRWAVES and hence get transmitted over the radio. Following will apply for sites HFON, GUM, LOX, MTR, SGX and PBP.

As user `root` on **DX1**:

```
cd /data/fxa/INSTALL/awips2/REHOST_CODE/16.2.2_adapt
scp nwrwaves_HLS.csh px1f:/awips/adapt/NWRWAVES/AWIPS2-
nwrwaves.csh          (Execute this command in one line)
scp nwrwaves_HLS.tcl px1f:/awips/adapt/NWRWAVES/AWIPS2-
nwrwaves.tcl          (Execute this command in one line)
```

A.4.5 Changes for WarnGen Mixed Case Products

A.4.5.1 Introduction

Release OB16.2.2 contains several changes related to WarnGen mixed-case products.

After the OB16.2.2 WarnGen post install is completed, consult the following page for full WarnGen mixed case migration instructions:

<https://collaborate.nws.noaa.gov/trac/siteconfig/wiki/MixedCaseMigration>

The OB16.2.2 install script automatically makes the following changes to all site-level WarnGen templates:

- a. The previous template file is backed up in the site-level directory using the same template name with the file suffix **backup**.
- b. The tag **<productId>** is added to every template file so WarnGen can use the mixed-case turnkey configuration file.
- c. The following template text is changed to all capitals for emphasis:
 - TAKE COVER NOW
 - SEEK SHELTER NOW
 - SEEK SHELTER IMMEDIATELY
 - IMMINENT DANGEROUS WEATHER CONDITIONS
 - IMMINENT, DANGEROUS AND POTENTIALLY LIFE-THREATENING WEATHER CONDITIONS
 - DANGEROUS SITUATION
 - EXTREMELY DANGEROUS SITUATION
 - VERY DANGEROUS SITUATION
 - PARTICULARLY DANGEROUS SITUATION

A.4.5.2 Post-Install Actions

1. Workstation **PRACTICE MODE** should be used to test each WarnGen product. If the `<productId>` tag is missing in a site-level template, using WarnGen **CREATE TEXT** results in a red banner message that the template does not contain this tag. If the error occurs, add the text `<productId>NNN</productId>` in the site-level xml file where **NNN** is **SVR**, **TOR**, **FFW**, etc. as in the corresponding baseline OB16.2.2 xml file. After testing, the site-level backup files may be removed. The template files can be accessed using the CAVE localization perspective in the File Browser under D2D and WarnGen.
2. The following mixed-case typographical errors need to be fixed in site-level templates:
 - File `arealFloodWarning.vm`: in line 247, the upper-case text "AT" and "MPH" need to be changed to lower-case "at" and "mph".
 - File `burnScarFlashFloodWarning.vm`: in line 35, the text "heAVY" needs to be changed to "heavy".
 - File `impactSevereWeatherStatement.vm`: in lines 223 and 225, the text "Therefore, " needs to be changed to "Therefore" (remove the comma). In the "historyWindCTA" section (near line 1115), the text "sSek" needs to be changed to "Seek". In the "extremeWindsCTA" section (near line 1132), the text "THis" needs to be changed to "This".
 - File `impactTornadoWarning.vm`: starting near line 51, there are six places where the windTag lower case value "mph" needs to be changed to upper case "MPH" (for wind speeds of 50, 60, 70, 80, 90 and 100 MPH).
 - File `impactSpecialMarineWarning.vm`: near line 515, the lower case text "in" and "mph" need to be changed to upper case "IN" and "MPH".
 - File `impactSpecialMarineWarningFollowup.vm`: near line 751, the lower case text "in" and "mph" need to be changed to upper case "IN" and "MPH".
 - File `significantWeatherAdvisory.vm`: in line 23, the text "these storms were" needs to be changed to "These storms were". In line 27, the text "this storm was" needs to be "This storm was".
3. The `commaOrEllipsis` macro was mistakenly added to the baseline templates, but is not needed. The macro definition was added to file `VM_global_library.vm`. The macro is invoked in numerous places by the baseline template vm files, such as `impactTornadoWarning.vm`. If the `commaOrEllipsis` macro exists in any site-level vm template files, replace the text `"#commaOrEllipsis()` with the text `, "` (comma and space). In a future major AWIPS Release, the macro will be removed from the baseline and using it in any template will cause a WarnGen error.

ATTACHMENT B Rebooting RP Servers

Table B - 1: Server and Process Dependencies

	CHPS VMs	Process Dependencies
RP1	CHPS1	Forecast Shell Servers (user fews on CHPS3) Master Controller (user fews on CHPS1) JBoss (user fews on CHPS1) Tomcat (user root on CHPS1)
	CHPS2	Forecast Shell Servers (user fews on CHPS3) Master Controller (user fews on CHPS1) JBoss (user fews on CHPS1) Tomcat (user root on CHPS1) PostgreSQL Service (user root on CHPS2)
	CHPS3	Forecast Shell Servers (user fews on CHPS3) FewsPiService (user fews on CHPS3)
RP2	CHPS4 CHPS5 CHPS6	Similar to CHPS1/2/3
RP3	CHPS7 CHPS8 CHPS9	Similar to CHPS1/2/3

NOTE: Depending on what server is shutting down, ensure that all process dependencies on the server are first stopped in order. Otherwise, restarting the servers and software may cause problems.

B.1 Shutting Down Community Hydrologic Prediction System (CHPS) Processes

B.1.1 Shut Down the FewsPiService

1. Log on to **chps3** (or **chps6** or **chps9**) as user *fews*.
2. Shut down the FewsPiService backend process by typing the following commands:

```
cd /awips/chps_local/fewspiservices
```

```
ls ??rfc_pi/*.pid
```

(where *??rfc* is the five-letter ID of the **RFC**, for example, *wgrfc*)

There is a file named `[pid number].pid`. Take note of the `pid` number. If no `pid` number is available, the FewsPiService is not running on that system.

```
./fews_piservice.sh ??rfc_pi stop
```

3. Check that all the FewsPiService process has shut down by typing the following command:

```
ps -eaf|grep <insert pid number here>
```

If the FewsPiService continues to run, kill the orphan process by typing the following command:

```
kill -9 <insert pid number here>
```

B.1.2 Shut Down FSS

1. Remain on **chps3** (or **chps6** or **chps9**) as user *few*s.
2. Shut down all the Forecast Shell Server (FSS) processes by typing the following command:

```
find /awips/chps_local/fss/ -name "mcproxy.sh" -exec {}  
stop \; (Execute this command in one line)
```

3. Check that all the FSS processes have shut down by typing the following command:

```
pgrep -f mclistener
```

If that command returns empty, the FSS processes were properly stopped. If an FSS is currently running, the process will continue to execute until it completes and should not be killed.

B.1.3 Shut Down MC

1. Log on to **chps1** (or **chps4** or **chps7**) as user *few*s.
2. Stop the Master Controller (MC) by typing the following command:

```
mcstop
```

3. Check that all the MC processes have shut down by typing the following command:

```
ps -eaf | grep fews.master.mc.conf
```

CAUTION

For CHPS5.2.1, use Section B.1.4.

For CHPS5.3.1, use Section B.1.5.

B.1.4 (For CHPS5.2.1) Shut Down JBoss, Tomcat and PostgreSQL Database

1. Remain on **chps1** (or **chps4** or **chps7**) as user *few*s.
2. Shut down the JBoss process by typing the following command:

```
stopjboss
```

3. On the **chps1** (or **chps4** or **chps7**), change to user *root*.
4. Shut down the Tomcat process by typing the following command:

```
service tomcat stop
```

5. Log on to **chps2** (or **chps5** or **chps8**) as user *root*.
6. Shut down the PostgreSQL Database by typing the following command:

```
service postgresql stop
```

B.1.5 (For CHPS5.3.1) Shut Down ActiveMQ, Tomcat and PostgreSQL Database

1. On the **chps1** (or **chps4** or **chps7**) change to user `root`.
2. Shut down the ActiveMQ process by typing the following command:
`service activemq stop`
3. Remain on the **chps1** (or **chps4** or **chps7**), as user `root`.
4. Shut down the Tomcat process by typing the following command:
`service tomcat stop`
5. Log on to **chps2** (or **chps5** or **chps8**) as user `root`.
6. Shut down the PostgreSQL Database by typing the following command:
`cd /etc/init.d`
`service edex_postgres stop`

B.1.6 Shut Down Virtual Machines

1. Log on to **RP1** (or **RP2** or **RP3**) as user `root`.
2. Shut down the virtual machines by typing the following commands:
`virsh shutdown chps3 (or chps6 or chps9)`
`virsh shutdown chps2 (or chps5 or chps8)`
`virsh shutdown chps1 (or chps4 or chps7)`

B.1.7 Reboot RPs

Reboot **RP1** (or **RP2** or **RP3**) by typing the following command as user `root`:

```
reboot
```

B.2 Starting Up CHPS Processes**B.2.1 Start Up Virtual Machines**

1. After **RP1** (or **RP2** or **RP3**) has rebooted, log on to **RP1** (or **RP2** or **RP3**) as user `root`.
2. Restart the virtual machines by typing the following commands:
`virsh start chps3 && sleep 15 (or chps6 or chps9)`
`virsh start chps2 (or chps5 or chps8)`
`virsh start chps1 (or chps4 or chps7)`

CAUTION

For CHPS5.2.1, use Section B.2.2.

For CHPS5.3.1, use Section B.2.3.

B.2.2 (For CHPS5.2.1) Start Up PostgreSQL Database, Tomcat and Jboss

1. Log on to **chps2** (or **chps5** or **chps8**) as user `root`.
2. Restart the PostgreSQL Database by typing the following command:

```
service postgresql restart
```

3. Log on to **chps1** (or **chps4** or **chps7**) as user `root`.
4. Start the Tomcat process by typing the following command:

```
service tomcat start
```

5. On **chps1** (or **chps4** or **chps7**), change to user `fewes`.
6. Start the JBoss process by typing the following command:

```
startjboss
```

B.2.3 (For CHPS5.3.1) Start Up PostgreSQL Database, Tomcat and ActiveMQ

1. Log on to **chps2** (or **chps5** or **chps8**) as user `root`.
2. Restart the PostgreSQL Database by typing the following command:

```
cd /etc/init.d
```

```
service edex_postgres start
```

3. Log on to **chps1** (or **chps4** or **chps7**) as user `root`.
4. Start the Tomcat process by typing the following command:

```
service tomcat start
```

5. Remain on **chps1** (or **chps4** or **chps7**), as user `root`.
6. Start the ActiveMQ process by typing the following command:

```
service activemq start
```

B.2.4 Start Up CHPS AI

On an LX workstation, bring up the appropriate CHPS Admin Interface (AI) in a Firefox log on (if an error message appears on the first attempt to log on, exit out of Firefox and bring up the CHPS AI again in Firefox), click on **System Status** and ensure the database and Java Messaging System (JMS) are up. Leave the AI up.

B.2.5 Start Up MC

On **chps1** (or **chps4** or **chps7**), as user `fewes`, start the MC by typing the following command:

```
mcstart
```

B.2.6 Start Up FSS

1. Log on to **chps3** (or **chps6** or **chps9**) as user `fews`.
2. Start up all the FSS processes by typing the following command string:

```
find /awips/chps_local/fss/ -name "mcproxy.sh" -exec {}  
start \;
```

(Execute this command in one line)
3. Check that all the FSS processes have been started by typing the following command:

```
ps -eaf | grep FSS
```

B.2.7 Start Up FewspIService

1. Remain on **chps3** (or **chps6** or **chps9**) as user `fews`.
2. Go to the FewspIService directory by typing the following command:

```
cd /awips/chps_local/fewspiservices
```
3. Start up the FewspIService process using one of the following methods, found at the following link, after checking with the Development and Operations Hydrologist (DOH) at the site for the preferred method: <http://schuylkill.nws.noaa.gov:7069/default.asp?W124>

B.3 Final System Check

Go to the AI and hit **Refresh** every 30 seconds until all the FSS shells have started and the MC status is OK.

ATTACHMENT C DCS and DR Corrected in OB16.2.2

The following list of DCS and DR is corrected in OB16.2.2. Detailed descriptions of each DR can be found at https://vlab.ncep.noaa.gov/read_only_o_and_m_redmine/.

List of DCS

1. 8593 ApparentT Smart tool missing - TTR4093
2. 11248 Add NAVGEM(COAMPS) to list of known models - TTR6151
3. 13475 Hydro TimeSeries do not update in time series while zoomed in
4. 13910 GFE: Wave model data should be available in 3-hrly timesteps
5. 14217 Remove Hydro Time Series Limitations
6. 14228 Expand text fields in the IHFS DB/Hydrobase
7. 14232 Expand locarea:area field in IHFS DB
8. 14471 Latestobsvalue Table not updating in Hydro Time Series
9. 14576 SE: Need to calculate Haines Index for models
10. 14607 Hydrobase: Add a WFO filter parameter to Ingest Filter GUI
11. 14845 Ingest and Display NAM-DNG 2.5km CONUS
12. 15116 Install LAPS at the RFCs and OCONUS sites in order to get radar data into GFE
13. 16853 Nationalization of SmartInits
14. 17274 Upgrade Smack XMPP library to version 4.1.4
15. 17419 Addition/reconfiguration of Satellite Imagery Menu selections for OCONUS sites.
16. 17637 Remove NWSRFS Deliverables from the AWIPS Baseline Deployment
17. 17685 Damage Path Tool (Phase III)
18. 17815 WAVEWATCH III - add Wave Steepness
19. 17821 Damage Path Tool Kit (Phase III)
20. 17952 Changes to Support LX Workstation Replacement
21. 17997 Gamma control for true color imagery
22. 18133 Radar: Implement two new Volume Coverage Patterns (VCPs)
23. 18139 Make gfeParamInfo.xml overrides be accumulative, not a full override
24. 18145 grib decoder is unable to differentiate between two different model sources that share the same grid definition and forecast_process id
25. 18161 National Blend for Global models (Version 2)
26. 18172 Finalizing the Product Specifications for Mixed Case
27. 18180 Study and address RODO code improvement recommendations for DR 17935
28. 18196 Upgrade Jackson json to 1.9.x
29. 18251 Add PWPF data to AWIPS2
30. 18298 Upgrade Apache Ant from 1.7.1 to version 1.9.6

31. 18299 Upgrade Apache Batik 1.6 to 1.8
32. 18300 Upgrade CXF from 2.7.11 to 2.7.14 or better
33. 18301 Upgrade Apache Derby 10.10.1.1 to 10.12.1.1
34. 18302 Upgrade Apache Httpd 2.2.3 & 2.2.15 to 2.2.15-47
35. 18303 Upgrade ActiveMQ to 5.12.0
36. 18304 Upgrade or consolidate Jetty to 8.1.15 or greater
37. 18305 Upgrade wss4j from 1.6.14 to 1.6.19
38. 18306 Upgrade openSAML to 2.6.5
39. 18307 Upgrade jasper-1.900.1 security patch
40. 18308 Expand SPC Watches to outer coastal marine zones.
41. 18309 Display MRMS v11 Products
42. 18312 Upgrade camel to 2.16.0
43. 18313 Upgrade spring framework to 4.1.6
44. 18314 Upgrade slf4j to 1.7.12
45. 18315 Upgrade org.apache.commons.compress to 1.10
46. 18316 Upgrade org.apache.commons.lang to 2.6
47. 18317 Upgrade org.apache.commons.pool to 1.6
48. 18318 Upgrade org.apache.commons.codec to 1.10
49. 18319 Upgrade PostgreSQL to 9.3.10
50. 18337 Ensemble Tool: Matrix Navigation feature
51. 18338 Ensemble Tool: Distribution Viewer
52. 18378 CIS nodev/nosuid/noexec /tmp implementation
53. 18402 Storing boundaries data to site level
54. 18403 A user-defined boundary type for AWIPS2 Boundary Drawing Tool
55. 18405 Add an entry to userRoles.xml
56. 18408 Remove or separate legacy binlightning decoder
57. 18425 National Radar Display
58. 18427 Code Improvements for DR 18384 (Vlab 13938)
59. 18497 DSA Product Processing: Need to add new functionality due to ORPG Build 17 Changes
60. 18521 Switch LAPS/MSAS to use DAF scripts
61. 18528 16.2.2 Build and Merge Support
62. 18537 Improve efficiency of rendering satellite winds
63. 18582 Remediation of high findings from source code scan
64. 18597 VIIRS Imagery Updated NCC Color Table and VIIRS Purge Rules
65. 18603 Handle GOES-R products received in the Center/Test position

66. 18611 16.2.2 NCEP Support
 67. 18612 Use netcdf data description in goesr decoder
 68. 18613 EDEX GFE startup should initialize on its own thread
 69. 18614 PythonJobCoordinator API code enhancement
 70. 18615 Format query results on the EBXML registry web interface query page into a more user friendly format
 71. 18628 Remove dataURI from database where possible
 72. 18643 Rework thin client connections (JMS) preferences to be more intuitive
 73. 18670 ebxml-thrift-client-route.xml duplicates much of request-service.xml
 74. 18671 UtilityManager should optimize checksum loading of large directories
 75. 18677 Replace calls to deprecated LocalizationFile methods in Raytheon edex/common/viz plugins
 76. 18684 Menu variable substitution cannot substitute variables
 77. 18685 Update JAXBManager for Java 7 (maintain backwards compatibility)
 78. 18687 Isolate simple text product decoding
 79. 18688 EDEX should periodically monitor tables for need to reindex
 80. 18689 ByteArrayOutputStreamPool doesn't allow for safe data access after close
 81. 18690 Add support for short data to the PointSet plugin
 82. 18699 Consolidate DD registry/centralRegistry modes with ebxmlRegistry mode
 83. 18709 NCEP EDEX Plugins for 16.2.2
 84. 18710 NCEP CAVE Plugins for 16.2.2
 85. 18711 NSHARP improvements for 16.2.2
 86. 18729 CAVE: Increase java heap space from 4096M to 6144M in cave.ini and wfo.ini files
 87. 18733 Add 20km Pacific GFS grid and remove 381km GFS data
 88. 18764 SBN & NWS Data Availability Metrics Collection
 89. 18938 MHS, to support PGEN XML file sharing between sites
 90. 18981 RedHat 6 KDE kompare file comparison tool for the ADE at WFOs
 91. 19028 Collaboration should provide an optimized extension for PointSet rendering
- List of DRs
92. 621 AWIPS2 BCQ---Radar data from radar server and LDM are stored differently
 93. 627 GFE: In product editor, `corrected? misspelled `correctedd?
 94. 11474 Put Home Cursor Tool Display rounding issue
 95. 11919 NIMNAT message should be on as default
 96. 12021 DMD icon does not change when zooming - TTR6373
 97. 12085 SNOW: Wind Chill, Frostbite Time should not default to 0. - TTR6392

98. 12419 Color Scale Truncation - take 2 - TTR6532
99. 12435 hwrnwws fails to store product locally
100. 13033 GFE: Improve error message for bad characters in text formatter definitions
101. 13094 Svr Wx Plot product time (green time) does not match the time from legend
102. 13214 Word Wrap does not work when text entered from Search/Replace
103. 13261 GFE: alertviz messages from text formatter
104. 13298 Bufrrua purge rule not being used
105. 13302 Green Times for upper air soundings do not show non-standard times (D 15312)
106. 13459 GFE: Smart tool hiding does not work in some cases
107. 13794 GFE: pencil tool in ISC mode works incorrectly when using grids
108. 13853 D-2D: Entry for DSD in dual pol version of radar menu is incorrect
109. 13996 Order of sampling text reverses at bottom of D-2D display
110. 14014 GFS40 model run precip display incorrect
111. 14165 Hydro: Flash Flood Guidance Areal FFG Mode UELE error
112. 14176 d2dContourStyleRules.xml error
113. 14307 WarnGen Drop Down Menu Not Sorting Issued Products Correctly
114. 14315 City of Bedford in Virginia, FIPS code VAC515 becomes obsolete
115. 14453 GFE: color issue for TR Wx type
116. 14539 Hydro--purge decodedpa log
117. 14647 Model names in NSHARP different from common name
118. 14655 Time height,series - when swapped to side panel some of time period lost
119. 14775 GFE: Saving to file fails when correcting a product in product editor
120. 14792 River Gauge Primary Elements Cannot Be Deleted from Hydrobase
121. 14802 D2D: Unable to load Max/Min T for RTMA in Volume Browser
122. 14803 TextWS: WMO Header not being added to Record Event Report products.
123. 14827 GFE/GHG: GHG monitor is tied too closely to the GFE perspective
124. 14977 MKX: AWIPS II Hydro Database Manager: Missing Lat/Lon in text report B-44A
125. 15489 HydroView - RiverMonitor/PrecipMonitor missing FFG and Precip Data
126. 15685 Rehosted climate F6: Monthly mean temperature can be rounded incorrectly
127. 16737 Tab loses focus when swapping panes of certain radar products
128. 16910 Pressure plotted on PVU surfaces is substantially different on NWP models with fewer grid points (e.g. ECMWF, GFS90)
129. 16932 AWIPSII: Issue with Time Series Display
130. 16950 TextDB incremental purge does not work
131. 16970 LAPS 1500m Pressure D-2D display incorrect

132. 17097 TextWS: Saving a product and re-editing it causes additional headers in the Text Editor window
133. 17110 A2 doesn't display 5 min duration tabular data if it is part of a Time Series group
134. 17157 GFE: enabling the trace option can result in large log files
135. 17245 Bug with RPG selection when doing RMRs
136. 17308 14.3.1: Change in storage of LI products for some models results in inconsistent storage, problems in GFE display
137. 17311 Cannot create SPS if <warngenOfficeShort> variable contains a "-"
138. 17336 Buoys not getting most recent data into RWR and HWR products
139. 17358 Using RPS List Editor to add DUA
140. 17387 OCONUS: Satellite menu under Derived Products Imagery display incorrect sector
141. 17512 transferNWS.pl does not write debug messages to transferNWS.log
142. 17531 Drag me to storm dot should be editable for EXP products
143. 17567 MDCRS sounding plots showing latitude/longitude instead of airport ID in NSHARP
144. 17614 TextWS does not display updated MND time in editor after sending
145. 17651 FFMP Basin Trend - 1st time step excluded from accumulation
146. 17652 Hydrobase: no longer uses location lat/lon as a first guess for new River Gage entry
147. 17749 postgresql rpm missing dependency to netcdf
148. 17787 H-F Radar Surface Currents (HFR) Displays wrong Units
149. 17894 CAVE can lock up when Clear is clicked during a time matching operation
150. 17925 Point Data Control: No time window for precip
151. 17989 East Pacific Hurricane track summary is not showing up in d2d
152. 18029 Hourly Hurricane track summary forecast plotting incorrectly for cyclones in D2D
153. 18059 Time of Arrival Tool showing incorrect times
154. 18115 Some WRK products appear to not store to textdb
155. 18134 AlertViz: Threat Monitor icons do not change color for new threats.
156. 18140 Time Series: errors when editing data from graphical view
157. 18157 Tracking Meteogram: Clearing does not get back to original perspective in 1 click
158. 18168 Total Lightning: Raw total lightning (in-cloud) points should use a larger point symbol to display
159. 18241 Resource polling job not always properly stopped at application shutdown
160. 18336 Legend does not update when keep-alive records from lightning data sources are received
161. 18350 MPE: Daily QC displays all temperature data as "missing"
162. 18361 Some synoptic obs data not being decoded

163. 18387 Tracking Meteogram: When loading 4-panel radar product, TMT only shows plots from upper left and bottom right products
164. 18399 METAR decoder stores sea level pressure with incorrect units
165. 18413 AvnFPS: Need to add feedback when TAF transmission fails
166. 18440 Making small changes to grids and subgrids requires clearing out data for affected models
167. 18446 Dendritic Growth Temperatures (Tdend) and Preferred Ice Growth (SnowT) show incorrect units in D-2D image display
168. 18450 GFE: Canceling expired products should not be allowed
169. 18479 Move damage path menu into plugin
170. 18481 MPE: persistent polygons remain on the display after being deleted
171. 18529 Error returned when zooming into a cross section such that the entire chart is no longer visible
172. 18535 ILocalizationFile should provide API for detecting multiple concurrent edits
173. 18536 Volume Browser - clearPlanes allows you to re-add Sources and Fields
174. 18538 Long item lists cause the OK/Cancel buttons to fall off the screen in the Delete Confirmation dialog in the Localization perspective
175. 18549 Renamed tab reverts to 'Map' when opening up a 4-panel display and returning to a single pane
176. 18550 Product Browser should not throw errors when data plugins are missing from edex
177. 18551 Strange metar can be decoded but throws errors storing to HMDB
178. 18552 Delete bufquikscat plugin
179. 18553 edex-environment FOSS incompatibility in 16.2.2
180. 18554 GFE: AV ULE-NPE error occurs if you attempt to create grid from scratch without having first selected a wx element
181. 18555 Remove PIL from install
182. 18556 Remove duplicate pygtk in the system
183. 18557 Better error handling required if no data available for NCEP Upper Air Plots
184. 18558 NetworkTrafficSelect traffic logging broken by jetty 9.0.7 upgrade in 16.2.2
185. 18559 Replace outdated logging in edex plugins with SLF4J
186. 18564 openSAML upgrade broke registry XACML, registry broken in 16.2.2
187. 18565 Changing map scales disables lat/lon readout, but lat/lon checkbox remains selected
188. 18566 LSR decoder throws out whole file when a single ob has bad location
189. 18574 NPE returned when double clicking on the 'Loading' entry in the Product Browser before products are listed
190. 18575 Fix sizing issues with Loop Properties Dialog
191. 18583 D2D - all panels not same zoom when opening 4-panel product on zoomed in display

192. 18586 ANCF - SVC rsync hangs when a site falls off WAN in the middle of a rsync
193. 18595 NWRWAVES produces an incorrect timestamp for products issued on the 31st of the month.
194. 18599 MPE: Daily QC for Temperature: grid disappears when closing single-station-edit dialog after having used group edit
195. 18608 Improve radar processing for LAPS
196. 18616 PGEN dialog in D2D has two Start and two Help menus
197. 18627 The class BufrMosDataLocation should not use the hash code to generate an id
198. 18630 GFE ISC: No Weather Elements display in ISC Request/Reply dialog
199. 18631 Thin Client Network Statistics are broken
200. 18632 DMW barbs are in m/s when legend is in kts
201. 18633 AWIPS II capture script should also capture the current state of processes on px1 and px2
202. 18634 start-edex-* log files not readable by awips user
203. 18641 Develop windows capture script
204. 18642 Run menu appears in the thin client CAVE
205. 18672 Registry Error with delete of orphaned slots
206. 18673 First user-created smart tools and procedures fail to import
207. 18674 Update text ScriptRunner to not depend on uEngine
208. 18675 Fix sizing issues with Make Hazards Dialog
209. 18676 Class cast exceptions in registry replication web service.
210. 18678 Certain SvrWx files sent incorrectly to WarningDecoder (aka VTECDecoder)
211. 18679 Remove nonfunctional textdb -tA / -tR options
212. 18680 PointDataAccessFactory is filling the level database table
213. 18681 NGM MOS has been discontinued
214. 18682 SvrWx decoder skips data that does not have a 3 letter stationid
215. 18683 Error is returned using the Imaging... dialog after loading a combined image
216. 18686 Issues opening the Alert Viz System Log
217. 18697 FFMP 24hr source fast load and FFTI file purging.
218. 18698 Add a Levels attribute to the Grid Subscription Rules
219. 18700 Reselecting the Pre-defined Region radio button does not reset the lat/lon values
220. 18701 BandwidthMapManager appears to leak memory
221. 18702 Unable to close the Area Filter Selection dialog when clicking Cancel
222. 18718 Data Delivery: Validation error is returned in Area Filter Selection dialog when manually entering lat/lon entry data into any field
223. 18730 Data Delivery certificate setup changes for DoD certs

224. 18741 Possible VTEC Handling error at year boundary
225. 18757 Updating existing subscription shows false positive for complete match and halts update
226. 18765 Modify LDM software to support higher number of retransmitted products
227. 18768 GFE: When second formatter is run, GUI does not pop up until first formatter has completed
228. 18777 Remove IP addresses from serverConfig.py
229. 18801 Error returned when performing a search within the Data Delivery Notification Center dialog
230. 18805 GFE: Large number of weather types causes error in ISC mode
231. 18811 Unable to recall modified colormaps
232. 18812 Thin Client connectivity dialog falsely shows failed validation
233. 18815 Update product legends and Volume Browser fields to denote times for PWPF
234. 18821 LX Upgrade: GUI sizing issues in AvnFPS dialogs
235. 18822 LX Upgrade: GUI sizing issues in AlertViz dialogs
236. 18823 LX Upgrade: GUI sizing issues in BMH dialogs
237. 18824 LX Upgrade: GUI sizing issues in Data Delivery dialogs
238. 18825 LX Upgrade: GUI sizing issues in GFE dialogs
239. 18826 LX Upgrade: GUI sizing issues in Hydro dialogs
240. 18827 LX Upgrade: GUI sizing issues in MPE dialogs
241. 18828 LX Upgrade: GUI sizing issues in the Statistics dialog
242. 18829 LX Upgrade: ifpIMAGE fails in LX upgrade build
243. 18830 LX Upgrade: TextWS dialogs open on left monitor rather than the monitor hosting CAVE
244. 18831 LX Upgrade: GUI sizing issues in Image Export dialog
245. 18832 LX Upgrade: Font size of station plots are small
246. 18833 LX Upgrade: RPS List Editor dialog opens on a different monitor
247. 18834 (Original DR 18629) Write python DAF regression test script
248. 18846 LX Upgrade: Volume Browser fails to open after switching perspectives
249. 18847 LX Upgrade: Radar Algorithm Overlays - data in tables at top of display are not aligned
250. 18850 16.2.2 thinclient cave cannot use derived parameters when connecting to 16.2.1 edex
251. 18851 LX Upgrade: CAVE preference Video Card Texture Cache Size needs updated
252. 18861 Fix MRMS purge rule
253. 18862 GFE: Save File option on the Formatter Launcher GUI is not working correctly

254. 18863 D2D: Radar Display Control settings may revert after changing
255. 18872 Postprocessors are not working in 16.2.2
256. 18886 The Radar Menu in D2D Bar is Missing & Dual Pol User Accum Mosaic Products Cannot be Displayed
257. 18887 GFE - TestSendWFOMessage fails due to changes in ifpClient.java
258. 18890 Java heap space parameter in cave.ini and wfo.ini files will not reflect changes made within memorySettings.xml
259. 18892 Tracking Meteogram: TM tab does not dispose on clear when loaded with a 4-panel plot
260. 18893 Remove IP address from nrldb.conf
261. 18894 Remove IP addresses from BMH test AFC-daily.ASC config
262. 18895 Performance Improvement in DisplayElementFactory.java
263. 18896 National Blend for Global models (Version 2)
264. 18913 Baseline All Radars for National Radar Display
265. 18932 NSHARP will not launch with /tmp nodev,nosuid,noexec options enabled
266. 18933 BMH edex and comms_manager will not start with /tmp nodev,nosuid,noexec options enabled
267. 18936 D2D-Tools: Boundary Tool menu item not showing up Tools menu
268. 18948 D2D: HiResW-NMM and HiResW-ARW model data are not loading from Volume menu
269. 18949 Hydro Time Series: error when editing records in tabular view
270. 18955 CWASP cannot update automatically
271. 18961 YAJSW jna_tmpdir defaults to /tmp
272. 18962 GFE silently fails when retrieving large numbers of grids
273. 18971 caveUtil.sh may attempt to create a temporary Eclipse configuration directory in a deleted directory
274. 18980 Collaboration login dialog needs very clear error messages
275. 18983 Hydro Database Manager: UELE when saving updates of River Gage data
276. 18984 DCS18139 fix didn't enable loading all levels of gfeParamInfo.xml files
277. 18990 LX Upgrade: Print outs from CAVE are not centered and being cut off
278. 18995 MSAS: MSL pressures not displaying properly in 16.2.2
279. 18997 D2D-Tools: LocalizationFileVersionConflictException while saving the boundary data
280. 19003 LAPS: reformatTest hangs and uses 100% of CPU on px machine
281. 19005 BMH shell style for trim buttons are missing on a couple dialogs
282. 19011 GFE: Occasional errors opening zipfile when gfeclient is run from px machine
283. 19012 MPE and Hydro Color Scale Manager: errors when saving edits to color scales

284. 19014 GFE: Sites receiving NDFD integrity errors for Td>T when T and Td are very close
285. 19015 Several functions fail in VerifySSHkeys.sh due to AWIPS security implementations
286. 19016 MPE Daily QC: error when prompted for saving level 2 data
287. 19025 Additional swear word dictionary cleanup and inappropriate additions
288. 19026 10km Radar Coded Message Paint Error
289. 19027 PointSet Netcdf decoder is leaking file handles
290. 19029 Collaboration: Swapped panes do not inherit session name in map tab; maintain session name after session is closed
291. 19030 LX Upgrade: The FFMP column headers are not aligned
292. 19033 BMH SAME Transmitter Alignment uses legitimate SAME Tones
293. 19049 D2D-Derived Parameters: Null Pointer Exception received when loading some Derived Parameters from Volume Browser
294. 19069 March 2016 Security Patches
295. 19070 LAPS - satellite access via DAF broken
296. 19072 Hydro Database Manager: db error when saving Location data.
297. 19074 synchronise the English BMH unacceptableWords list to the general list in CAVE.
298. 19075 synchronise the English BMH list to the Spanish BMH list.
299. 19076 LX Upgrade: FOG/SAFESEAS/SNOW Column Headers Not Aligned
300. 19078 GFE: GHG Monitor is not working correctly with zooming features
301. 19082 LX Upgrade: NPE received when Product List button is selected a second time
302. 19090 FFMP: QPE values 0 in 16.2.2
303. 19095 Change national radar pattern to allow for archival
304. 19096 GFE: PlotTPCEvents can fail with exception casting data type
305. 19097 FFMP RFC Flash Flood Guidance Not Showing All Current Data
306. 19109 GFE: Bullet text headers should be ALL CAPS according to Mixed Case Text Guidelines (Ver 12 5/5/2016)
307. 19110 Cannot Save Custom Points List & Get Alertviz Error When Renaming a Created New Group in Points List Dialog
308. 19112 GFE: The first letter "o" of the word "outdoor" was not being capitalized under the Impacts bullet text header (FW.A & FW.W)
309. 19116 GFE: Incorrect spelling of word "occurring" under the CTA section of HF.W hazard
310. 19128 16.2.2: Edex processing of qc data failing with camel errors
311. 19130 AK REGION not set properly for Wave models
312. 19135 GFE: GetSiteTimeZoneInfoRequest should allow null or empty list for requestedSiteIDs
313. 19140 GFE: runIFPText writes WRK files in all CAPS

314. 19141 NWRWAVES crashes in two special cases caused by code of the DR-18595
315. 19142 WarnGen Templates: Cleanup for some Mixed Case updates and delta scripts for sites (from DCS 18172)
316. 19143 16.2.2: Some types of site level station locations are no longer displayed in D2D
317. 19144 WarnGen Templates: KTS and IN need to be in CAPS for SMW products
318. 19145 EDEX GRIB decoder: estofsEP stored as estofsUS
319. 19149 Hydro Database Manager: db error when trying to change configuration in Ingestfilter GUI
320. 19153 TextWS: Alarm/Alert Bell disappears when the products cleared from Current Alarm Queue GUI.
321. 19155 MPE and Hydro Color Scale Manager: error messages when deleting a color profile
322. 19156 GFE: InundationMax grid not read by TCV formatter
323. 19157 GFE: Add 3 foot option for Inundation Height for TCStormSurgeThreat values
324. 19158 GFE: make_hti.sh script needs to create a specific file IDG requires in order to generate the mosaics of each element
325. 19160 GFE: TCStormSurgeThreat grids are not being purged
326. 19161 Add NAVGEM grid definition for 0.5 degree resolution
327. 19164 Modify environment flag in LAPS and MSAS access script for LAPS V2
328. 19165 Permissions issues for localization files post 16.2.2.
329. 19166 Hydro Time Series Graph Display is not Drawing X and Y Axis.
330. 19172 Sea level pressure displayed incorrectly with DAT products
331. 19173 EDEX grid decoder may fail to store models defined with COVERAGE pattern
332. 19174 EDEX grid decoder stores grids with incorrect name due to bad or mismatched grid definition files
333. 19175 Hydro: font size setting is not maintained between sessions
334. 19177 WarnGen: Misspelling in BASE impactSevereWeatherStatement.vm WarnGen
335. 19179 AlertViz can report errors during purge and subsequent messages
336. 19182 Issue opening Data Sources in hydro database manager
337. 19183 NWRWAVES: Tcl formatting issue with octal numbers
338. 19186 WarnGen Templates: Case corrections - Make MPH caps for "windTags" and capitalize sentence starters in SPS
339. 19193 Baseline grid parameter table file missing units, causes decoding errors
340. 19214 GFE: Product type line should be created in Mixed Case text for all products (As per item#2b of Mixed Case Text Guidelines Ver 12)
341. 19215 GFE: Issuing office line should be created in Mixed Case text for all products (As per item#2c of Mixed Case Text Guidelines Ver 12)

- 342. 19216 GFE: Headline statement should be ALL CAPS for all products (As per item#5 of Mixed Case Text Guidelines Ver 12)
- 343. 19218 GFE: Section headers and sub-headers should be followed by Mixed Case instead of ALL CAPS
- 344. 19221 GFE: Section Headers should be created in All CAPS (As per item#6 of Mixed Case Text Guidelines Ver 12)
- 345. 19234 On some (not all) products, NWRWAVES is incorrectly adding one month to the start time of the product
- 346. 19249 bufrrsigwx, cwa, tcg, and tcs plugins have incorrect unique constraint
- 347. 19284 GFE: 30 second delay when formatters are run after zone combination change
- 348. 19297 NWRWAVES needs to be rolled back to 14.3.1 for HFON, GUM, others for the HLS issuance
- 349. 19301 Registry is dropping replication events
- 350. 19302 PDA: Registry jym takes over an hour to start with PDA subscriptions active

ATTACHMENT D Sample EMRS Report

New A26 Commit A26 Place on Hold Copy A26 Delete A26 Detail Report Document Summary Create USOS

ENGINEERING MANAGEMENT REPORTING SYSTEM
Maintenance and Unscheduled System Outage (USOS) Reporting - A26

GENERAL INFORMATION

NEW RECORD WFO* BTV Document No.* BTV160811000

1. Open Date	Open Time <input checked="" type="radio"/> Local <input type="radio"/> UTC	2. Op Initials	3. Response Priority	4. Close Date	Close Time
08/11/2016	08:00	WSH	<input type="radio"/> Immediate <input type="radio"/> Low <input type="radio"/> Routine <input checked="" type="radio"/> Not Applicable	08/11/2016	10:00

5. Maintenance Description 480 characters left AWPS

AWIPS Release 16.2.2

EQUIPMENT INFORMATION

6. Station ID*	7. Equipment Code*	8. Serial Number	9. TM	10. AT	11. How Mal
BTV	AWIPS	001	M	M	999

Alert: Time Remaining: (For Block 12 use only)

13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING

ASN	Vendor Part No. (New Part)	Serial Number (Old Part)	Serial Number (New Part)	
				New Row
				Delete Row

14. WORKLOAD INFORMATION

a. Routine	b. Non-Routine	c. Travel	d. Misc	e. Overtime
Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes
			2 0	

MISCELLANEOUS INFORMATION

15. Maintenance Comments 675 characters left [View Status History](#) [Attachments](#)

Installed AWIPS Release 16.2.2, I.A.W. AWIPS Software Installation Note 106

16. Tech Initials
JRC

Contract Maintenance Disclaimer Number of Technicians: 1

17. SPECIAL PURPOSE REPORTING INFORMATION

a. Mod No.	b. Mod Act/Deact Date	c. Block C	d. Trouble Ticket No.	e. USOS Outage Doc No.	
S106	08/11/2016				Expand

18. Work Order Information:

Work Accomplished by

Region Headquarters
 Electronics
 WFO/Office
 Facilities

Maintenance Contractor

Est. Cost or Bid	Req. Completion Date
\$	
Contractor Maintenance Time	
Hours	Minutes

Commit A26
Schedule on Commit
Place on Hold
Schedule on Hold
Copy A26
New A26
Cancel