



**Raytheon**

## **AWIPS Operational Build 16.4.1 Final Release Notes**

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Advanced Weather Interactive Processing System (AWIPS)  
Operations and Maintenance

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## Change History

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## Overview

The Release Notes have been prepared for AWIPS software release OB 16.4.1. These Release Notes, which follow the standard format applied to most AWIPS Release Notes documents, consist of the following five sections:

- **Section 1. Requirements DRs.** This section lists the requirements Discrepancy Reports (DRs) identified for the current release.
- **Section 2. Passed DRs.** This section lists the **192 DRs** that were passed at the Raytheon Facility Test Labs and included in the current release, OB 16.4.1. This includes DRs written during the current release as well as DRs deferred from previous releases to this release. [*Note:* All DRs that were passed prior to this release can be accessed through the AWIPS Redmine database.]
- **Section 3. Open DRs.** This section addresses open DRs and DCSs that have been deferred to the next immediate release. The DRs identified in this section may have been initiated during the current release or during a previous release. The DCSs may have been initiated from a previous release or initiated in the next immediate release.
- **Section 4. Design Changes and COTS FOSS Requests: 40 Design Changes and 21 CFRs** are summarized in this section.
- **Section 5. Known Problems, Workarounds, and Additional Release Notes.** This section lists any workarounds or additional release notes that have been issued for the current release. They are identified by their Release Note title. Also identified in this section are any known problems (Priority: 1-Critical), either in the current release or in previous releases, which have been deferred to an unnamed future release. These are identified by the Problem title.

## 1. Requirements DRs

This section is reserved for requirements Discrepancy Reports (DRs) identified for the current release. No such requirements DRs were identified for the current release.

## 2. Passed DRs

This section lists the **192 Discrepancy Reports (DRs)** passed at the Raytheon Facility Test Labs and included in the current release (OB 16.4.1). These DRs were either written during the current release or deferred from a previous release. [**Note:** All DRs that were passed prior to this release can be accessed through the AWIPS Redmine database.]

The following tables identify the DRs that have passed by Redmine DR number (see column 2), and briefly describes them (see column 3). Expanded descriptions follow the table. Sequential numbers in column 1 of the table cross-reference each of the DRs to its expanded description.

DRs: Release OB 16.4.1

	DR, DCS or CFR	Description
1	19561	GFE: Combinations file not synced properly
2	19560	FTPS Connections to PDA do not timeout
3	19559	NWPS: fix grid definitions xml files
4	19558	When user attempts to display a map via the Hydro Point Data Control dialog, a classCastException is thrown by GetTotalPrecip.isAlertStation() method
5	19557	National Blend of Global Models ? pqact.conf pattern incomplete
6	19545	DAF Grid request with no parameters/times results in NPE
7	19537	Updating comps.xml to baseline FOSS python packages
8	19535	Ported Java Roc Checker does not properly limit data retrieved for data limits and location data limits
9	19529	GFE: Derived Parameters in GFE (DCS 18598) changes causing problems with HPCERP/TCFloodingRainThreat
10	19525	GHG Monitor missing minimize button in 16.4.1
11	19524	LSR: Event Log GUI text boxes not hidden
12	19523	Alarm Display Window has no minimize button
13	19520	Registry index changes cause postgres to crash when large text documents are stored
14	19519	DAF - Constraints are ignored when getting available times for warning / practice warning
15	19518	Cannot print from Text Workstation post-16.4.1
16	19516	Updating comps.xml for DCS 17826
17	19515	DAF - GFE wind direction request return wind magnitude
18	19508	Update cave.sh for handling decommissioned XTs
19	19507	GFE: Product editor adding spaces at beginning of lines when product is edited
20	19506	WarnGen: Alaska Region mixed case error in nonConvective FFW template
21	19501	Post 16.4.1 Text Browser Issues
22	19499	GFE - Grid Manager Display Mode and some Edit Preferences pulldown menus not working
23	19482	Python Data Access Layer returns grid data with an unusable shape

24	19467	Get UELE When Logging Back into Collaboration With autoFloat and autoAttach Enabled
25	19465	Grid Netcdf Decoder does not handle data with WMO headers
26	19457	Database backup script does not work with new roles and permissions
27	19456	WarnGen: impactSevereWeatherStatement.vm misspelling and grammatical error
28	19455	TextWS autostart for new LX workstations being lost
29	19449	16.2.2 - pqact.conf.template ? incorrect radar entry
30	19447	D-2D radar storm relative velocity (SRM) display may display incorrectly
31	19446	GFE: Formatter launcher freeze occurs in certain case
32	19444	DAF - limit by envelope broken for grid datatype requests
33	19419	Jar conflict present with Data Delivery crawler plugin and AWIPS2 FOSS plugin
34	19416	DAF hydro and climate requests for getAvailableTimes and getAvailableLocationNames do not use all fields
35	19412	16.4.1 - pqact.conf.template ? incorrect binlightning entry
36	19402	Update LAPS-MSAS install scripts to account for move of all base grib model files
37	19401	LSR - Saving new events fail
38	19399	The "Assign Transmitter Group(s)..." dialog in BMH is not sized correctly and is missing buttons
39	19391	Modifications needed for the backup and deploy scripts for LSR mixed case
40	19389	Database Authentication Prevents Import of GeoJSON Files Into Maps Database
41	19386	CAVE crashes to desktop when trying to load sounding data from the volume browser in D2D
42	19385	Dialogs are not properly centered after Eclipse 4 upgrade
43	19381	GFE: Unable to apply zone combinations for text formatters
44	19377	Eclipse 4: Menu items carry over to different perspectives when CAVE is launched with -perspective
45	19367	BMH: add 3 bytes of padding to SAME tone
46	19365	Eclipse4: An extra blank window appears along with the Contact Request dialog in Collaboration
47	19364	Archiver case creation GUI not able to save Radar data for the national mosaics
48	19363	GFE: HLS/TCV formatter logs should log for insufficient grid inventory
49	19356	GFE NWPS - Correct errors and omissions in serverConfig.py and nwpsCG1 smartInit
50	19346	pguser Name Needs to be Updated in .Apps_Default_site File
51	19341	Trying to Save a PDA Subset in Data Delivery Throws an Alertviz Error
52	19339	When cipher and legacy decryption fail, encrypted data is misidentified as keep-alive record
53	19337	WA 20.58 Move edex_static nwps grid files to common_static
54	19333	RiverPro adjustment to handle Sacramento tidal stage
55	19332	GOES-R - DMW ingest fails

56	19331	Services on central registry cause server to be constantly in swap
57	19330	PDA: Cannot create an adhoc query for a specific date
58	19329	PDA retrieval process incorrectly reports successful retrieval when products are failing
59	19328	PDA Metadata parser broken
60	19327	DD PDA: When zoomed into the mapscale, only the colorbar and the product legend will display when loading of a PDA product
61	19321	MPE Build Hourly: mismatched precip data values between Build Hourly and EDEX ingest.
62	19316	Rehosted climate F6: Monthly mean temperature can be rounded incorrectly
63	19308	Registry internationalstring and localizedstring tables not being purged
64	19307	Localization files have not been migrated over from edex_static to common_static
65	19305	Database permissions cause failures on EDEX/CAVE startup after clean install
66	19304	EBXML hibernate queries are returning the cartesian product of all slots on queries.
67	19303	MPE Daily QC: UELE when loading a date with saved Level 2 data.
68	19302	PDA: Registry jvm takes over an hour to start with PDA subscriptions active
69	19301	Registry is dropping replication events
70	19294	GOES-R "Hide incomplete Frames" feature is listed for each GOES-R product loaded
71	19248	GFE - runProcedure.py fails after Jep 3.5 upgrade
72	19238	Upgrade script for DCS 19131 doesn't hit all databases
73	19207	File missed in upgrade of Openfire in 16.4.1
74	19205	Error is returned when running the AFM formatter in GFE
75	19197	June 2016 Security Patches
76	19181	NUCAPS: missing IDX field in archive .bin files
77	19171	NCF Bandwidth Manager persistence issue at start up
78	19170	The Version menu becomes dithered/inactive in the Text Display window when the cursor is in the AWIPS ID, or WMO TTAAii CCCC textboxes
79	19169	Geometry in ActiveTableRecord causing OutOfMemory errors on ingest JVM
80	19168	Cryptacular java lib missing, 16.4.1 registry won't start
81	19159	HPE Not Inserting Correct Data Source Value into HpeRadarResult DB Table
82	19146	BMH scheduling, issue with changing suite
83	19137	GFE: PlotSPCWatches failed to run - database deadlock
84	19133	DD: Data Provider Agent does not work after 16.4.1 CXF upgrade
85	19120	Generate single retransmission request for each missing product with LDM
86	19113	Shared displays are broken due to collab-dataserver errors
87	19103	Eclipse 4 Upgrade: Error when clicking Matrix Tab in Ensemble Tool
88	19085	Dac Transmit does not retry audio reads on failure
89	19083	GOES-R true color is broken



90	19081	Station NCKN6 from ALY showing values of 'zero' in site
91	19079	AvnFPS: problem reporting erroneously high LIFR readings
92	19077	GFE: Product Editor word wrapping issue
93	19073	EDEX environment instances not being checked correctly, so only one can be run at a time
94	19068	DD: Pressure Levels in Subset Manager Subscriptions are not sorted correctly
95	19065	pypies is touching all files on repack instead of files that have changed
96	19063	True Color capability only works with open GL rendering
97	19062	FSSObs has warnings with some sky covers
98	19061	Orphan purging not working
99	19060	Colormap names are not restored after reverting a change in the colormap
100	19059	Errors decoding profiler data
101	19058	Unable to delete folders in the Localization Perspective containing only USER-level files
102	19057	GiniSatelliteDecoder incorrectly orients scanMode=3 data
103	19053	Indices not set in IDataRecord returned from slab retrieval
104	19050	SAILS : A combination of arrow key strokes returns incorrect frames with tdwr All Tilts data
105	19047	Confusing chat room behavior when trying to rejoin a room that you left
106	19046	Prints from Python to stdout no longer appear in the CAVE console log
107	19045	AWIPS 2 parameter lookups in DD should allow for Wind barb drawing etc.
108	19044	MPE: Unhandled event loop exception when adding a pseudo gage
109	19043	Graceful shutdown stopped an internal route too early
110	19042	MPE - UELE error received when opening Gages->QC Freezing Level
111	19041	MPE - Opening multiple/concurrent QC dialogs should not be permitted
112	19040	MPE: PseudoGage displayed different value from what was set in the Gage Table
113	19031	Registry drops replication event tables when restarted
114	19001	Shefdecoder fails to automatically create an entry in the IngestFilter database table when token shef_load_ingest is ON
115	19000	The width of the 'Add Notifier to' dropdown menu is too small; initially loads name with right justified formatting
116	18999	Provide ability to see jids (i.e. usernames) in Collaboration tab
117	18998	Collaboration needs more advanced logging to properly diagnose issues
118	18994	Collaboration Server Login window can be opened multiple times
119	18992	Add a double click option in the Room Search dialog to join a room
120	18991	Chat scrollbar can be positioned incorrectly when switching tabs
121	18985	VIR switch updates to access new ats1 ssh port
122	18972	16.4.1 Build and Merge Support
123	18970	Fix FOSS manifest version numbers
124	18959	Novra S300 DVB Receiver Monitoring and Collection Tool

125	18953	D2D: NLDN and ENTLN stats plotting incorrectly
126	18946	D2D display of CIMSS Probability Severe Model sometimes throws Paint error
127	18943	CAVE Collaboration plugin should have BASE config.xml
128	18940	GFE: Product Editor not wrapping first line of text
129	18939	Generalize WMOHeader class regular expression to eliminate LightningWMOHeader class.
130	18908	Warning expiration notice message appears immediately after issuing a warning in simulated time
131	18907	Warngen pathcasts do not work with WES-2 Bridge in simulated time
132	18897	CAVE shutdown closes Views before initiating closing process
133	18871	UELE/paint errors in Hydro perspective point data control
134	18800	Remove WSR-88D Alerting functionality from AWIPS
135	18798	D-2D Radar NEXRAD Unit Status incorrectly reports Backup Comms status as Unknown
136	18797	Radar - remove from AWIPS those products that are obsolete in WSR-88D Build 17
137	18774	HWR: Buffer limit prevents display of more than approx. 115 stations in RWR product
138	18762	GOES-R - Alaska sector navigation problem
139	18755	DD SBN data being sent to ingestGrib
140	18743	BOIVerify: Issue with data on which forecaster edited the grids
141	18736	MPE Gage Table: satellite values are off by 1 hour compared to the display
142	18735	Unable to delete user-created subset area in data delivery
143	18728	RadarServer cluster installs do not share configuration data
144	18726	Remove patched gov.noaa.nws.ncep.edex.uengine.jar
145	18653	AvnFPS: AvnFPS program freezing when TAF packages autosaves
146	18622	Radar: OTR elevation list active radars unsorted and contains duplicates
147	18594	GFE: Error in SAF Formatter Overrides causes incorrect end of line period
148	18587	CWSU ThinClient: Implement functionality to prevent /home directory filling up over time.
149	18567	Himawari-8 satellite products have shifted to the northeast
150	18547	TextWS: Can not edit WRK products in text window that have a ZCZC header but no empty following line.
151	18542	Issue with "Populate_SkyTool" base line smart tool
152	18517	EDEX Purger: The selectedRetentionHours tag in the RAW_DATA.xml and PROCESSED_DATA.xml are not being honored
153	18507	Crest History checkboxes get checked when new crests added
154	18438	TextWS: No space at the end of lines makes wrapping not work in some cases.
155	18409	ArealQpeGenSrv is not working
156	18376	MPE: Daily QC: error when trying to run from the top menu
157	18365	TextWS: Automatic filling out of AWIPS Header Block GUI fields problem.

158	18352	AvnFPS Text Editor hardcoded background color for discrepancy check
159	18346	BiasCorr_all.sh script error
160	18253	EDEX Fails to Handle End-of-month Metars
161	18169	Bug in BOIVerifyUtility getStatModelCases method
162	18159	Warngen: portion of zone incorrect if zone table has two records for same zone
163	18114	GFE Text Products showing in GMT rather than MST
164	17885	No way to select TDWR elevations below 0.5 in RMR GUI
165	17748	Error in NEXRAD Unit Status with MESO-SAILS
166	17642	Lifted index issue reporting in units of Kelvin but labeled as Celsius
167	17507	NAM12 Thunderstorm Probability (Tstorm Prob) displays only 0 HR forecast
168	17470	chps_backup_weekly failing to run
169	17453	AvnFPS: Problem with syntax checking
170	17411	Local (LDAD) obs are not displaying precip data during rain events
171	17295	AvnFPS: "Save As" function not working properly
172	17213	GFE: Problem with rsyncGridsToCWF_client.sh (rsyncGridsToCWF.sh) script
173	16940	Loss of pan and zoom features in main D2D panel when NWS Collaboration
174	16834	WAN backup products are not ingested
175	15633	GFE: Weather Element cannot be created with WFO type "NC" in its name
176	15543	RDUWRKLCO is being sent to the shefdeocder but not making to the database
177	14895	Multiple LAPS fields not created properly
178	14857	CCFP products not displaying when no convection is forecast
179	14758	GFE: Spell checker does not replace all the selected words in GFE
180	14687	Text products with FOUS12 KWNO header not stored with expected AFOS PII
181	14622	LSR: Update script for copying spotters list for 64-bit workstations
182	14493	D-2D: map background blinks or appears and disappears with zooming
183	14331	GFE: Extrapolate Procedure in GFE moving grids in wrong direction
184	14184	TextWS: Toggling "Autowrap" ON does not attempt to fix wrapping
185	13977	Missing Hydro QPE products in D2D
186	13824	TextWS: Non-US METARs do not auto update.
187	13773	Svr Wx Plot poor behavior
188	13221	Time Options does not work for NSHARP soundings
189	12353	Localization Perspective Allows Multiple Users to Edit Files Simultaneously With
190	9631	MDCRS/ACARS Sounding does not display dewpoint curve
191	7587	The NWRBrower GUI doesn't open when selecting Edit Climate Product in the Monitoring Controller GUI
192	272	goes/poesBufferStationInfo.txt file not processed properly by ndm endpoint

---

## 1. Problem: GFE: Combinations file not synced properly

The following issue was reported in OB17.1.1 during tropical testing in the Raytheon test lab. It was determined that it originated in OB16.4.1:

If a combinations file is updated by another user, it is only synced to other users' CAVE sessions on CAVE restart.

The steps below resulted in the issue occurring:

Matt had run some formatter (e.g. Hazard\_TCVAT1) prior to Shannon creating the combinations file for Hazard\_TCVAT4.

This first time you run a formatter the entire combinations file directory is synced to that user's caveData. Caching in localization prevents this from happening again in that cave session.

Shannon created/updated the Combinations\_AT4\_NHA file, etc. (ran the formatter, whatever else).

Matt opens a formatter tab for Hazard\_TCVAT4. The ZoneCombiner is created and starts listening for updates to the Combinations\_AT4\_NHA file but doesn't get any because the file was updated prior to it listening. Since the ZoneCombiner is not displayed the combinations file is not loaded which would have synced it to his caveData.

**Operational Impact:** Could result in formatter failure or running product over the wrong zones.

**Required Behavior:** Combinations files should be synced among all users without having to restart CAVE. **(DR 19561)**

---

## 2. Problem: FTPS Connections to PDA do not timeout

The DD registry isn't properly setting timeouts for its FTPS connections. This can cause a state where all of the FTPS threads hang up indefinitely and no data from PDA can be processed. This state is also difficult to detect as no error messages are thrown since the code doesn't know anything is wrong. PDA data request just continues to back up until the registry is manually restarted.

The code needs to be updated with two configurable timeouts for FTPS connections: one timeout on connecting and one timeout on transferring the data. Times for these should be configurable so they can be updated as needed without future code changes.

**Operational Impact:** PDA data cannot be processed and received.

**Required Behavior:** The code needs to be updated with two configurable timeouts for FTPS connections. (See description for more detail). This will prevent threads hanging up and allow PDA data to process normally. **(DR 19560)**

### 3. Problem: NWPS: fix grid definitions xml files

NCEP begins the parallel test period runs of the WR and pacific baseline NWPS domains. That is what will be implemented and sent via SBN to the sites. As part of the process they adjusted those domains slightly and therefore we need to update their baseline grid definitions xml files.

Update the following files:

- 1.cave/com.raytheon.viz.volumebrowser/localization/menus/volumebrowser/fields/planview-timeseries/sfc2d/NWPS.xml
- 2.cave/com.raytheon.viz.gfe/localization/gfe/weGroups/nwpsTrackingCG0.xml
- 3.cave/com.raytheon.viz.gfe/localization/gfe/userPython/procedures/Run\_NWPS.py
- 4.a number of Western and Pacific regions site-specific NWPS xml config files

- 1.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsCG1ALU.xml
- 2.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsCG1GUM.xml
- 3.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsCG1HFO.xml
- 4.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsCG1SGX.xml
- 5.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsTrkngCG0ALU.xml
- 6.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsTrkngCG0GUM.xml
- 7.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsTrkngCG0HFO.xml
- 8.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsTrkngCG0SGX.xml
- 9.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsTrkngCG0AJK.xml
- 10.edexOsgi/com.raytheon.edex.plugin.grib/utility/common\_static/base/grib/grids/nwpsCG1AJK.xml

1) The Run\_NWPS Procedure is supposed to default now to NCEP. It is still defaulting to Both. This should be included in an upcoming delta.

2) The baseline GFE weather element group for nwpsTrackingCG0.xml on the client side needs to be corrected to remove the Period10 and Wave10 elements that we got rid of. This goes in the baseline version on the client side here:  
/awips2/cave/etc/gfe/weGroups

It is the second attachment.

3) On the D2D Cave VB menus, the following baseline file on the client side:  
/awips2/cave/etc/menus/volumebrowser/fields/planview-timeseries/sfc2d/NWPS.xml

**Operational Impact:** Without the grib/grid changes in 16.4.1 baseline, WR and Pacific Region sites would not be able to ingest NWPS grids unless they do it at the site level.

**Required Behavior:** Ingest NWPS grids. (DR 19559)

---

### 4. Problem: When user attempts to display a map via the Hydro Point Data Control dialog, a classCastException is thrown by GetTotalPrecip.isAlertStation() method

The following classCastException is thrown when user attempts to display a map via the Point Data Control dialog:

```
ERROR 2016-11-07 17:38:11,616 7549 [Worker-16] CaveLogger: Error getting alert stations
```

```
java.lang.ClassCastException: com.raytheon.uf.common.message.response.ResponseMessageGeneric cannot be cast to java.util.ArrayList
```

```
at com.raytheon.uf.common.hydro.engine.GetTotalPrecip.isAlertStation(GetTotalPrecip.java:863)
```

```

at com.raytheon.uf.common.hydro.engine.GetTotalIPrecip.subtractRawPc(GetTotalIPrecip.java:572)
at com.raytheon.uf.common.hydro.engine.GetTotalIPrecip.getTotalRawPc(GetTotalIPrecip.java:100)
at
com.raytheon.viz.hydro.pointdatacontrol.engine.VizGetTotalIPrecip.getTotalRawPrecip(VizGetTotalIPrecip.java:436)
at
com.raytheon.viz.hydro.pointdatacontrol.engine.PointDataControlDerive.deriveRainReports(PointDataControlDerive.java:1168)
at
com.raytheon.viz.hydro.pointdatacontrol.PointDataControlManager.processAdhocRequest(PointDataControlManager.java:319)
at com.raytheon.viz.hydro.pointdatacontrol.PointDataControlManager.run(PointDataControlManager.java:1206)
at org.eclipse.core.internal.jobs.Worker.run(Worker.java:55)

```

**Operational Impact:** The only impact is that the User is getting AlertViz errors when they try to exercise user actions: cave -> hydro Perspective -> map data -> point data control -> elements (rain, pc and pp) -> click map. User did not report a problem displaying the actual data on the map.

**Required Behavior:** User actions cave -> hydro Perspective -> map data -> point data control -> elements (rain, pc and pp) -> click map should not produce AlertViz errors. **(DR 19558)**

---

## 5. Problem: National Blend of Global Models – pqact.conf pattern incomplete

BCQ reported that National Blend QPF is not being ingested due to an incorrect pqact.conf pattern. It is missing an 'I'.

Looking further - in 16.2.2 DCS 18161, additional elements were added for the National Blend model:

QPF, Snow Amount, Predominant Weather, Precipitation Type

The pqact.conf.template pattern needs to be updated for the ingest of these elements.

Currently the patterns are:

```

# DR 4958: NationalBlend model

NGRID    ^([ABCDEFGHRTW]AZ9[0-9]) (KWEA) (..)(..)(..)[^]*!(grib|grib2)/[^]*(/[^]*)#[^]*(/[0-9]{8})(/[0-9]{4})(F[0-9]{3})/([^\]*)

FILE      -overwrite -log -close -edex      /data_store/6/(3:yyyy)(3:mm)\3\4\7/GRID\8^(10)Z_(11)_\12)-
\1_2_3\4\5_(seq).\6.%Y%m%d%H

NGRID    ^([ABCDEFGHRTW]AZ9[0-9]) (KWEA) (..)(..)(..

FILE      -overwrite      -log      -close      -edex
/data_store/grib2/(3:yyyy)(3:mm)\3\4/NationalBlend\1_2_3\4\5_(seq).\6.%Y%m%d%H

```

The letters ILSZ need to be added to the second letter position, as below:

```

# DR 4958: NationalBlend model

```

```
NGRID ^([L[ABCDEFGHILRSTWZ]AZ9[0-9]) (KWEA) (..)(..)(..)[^!]*(grib|grib2)/[^]*(/[^]*)/#(/[^]*)/([0-9]{8})([0-9]{4})(F[0-9]{3})/([^\s]*)
```

```
FILE -overwrite -log -close -edex /data_store/6/(3:yyyy)(3:mm)3^4/7/GRID\8^(10)Z_(11)_\12-\1_2_3\4\5_(seq).\6.%Y%m%d%H
```

```
NGRID ^([L[ABCDEFGHILRSTWZ]AZ9[0-9]) (KWEA) (..)(..)(..)
```

```
FILE -overwrite -log -close -edex /data_store/grib2/(3:yyyy)(3:mm)3^4/NationalBlend\1_2_3\4\5_(seq).\6.%Y%m%d%H
```

NOTE: There are currently two patterns for National Blend because LDM is not currently able to parse the full metadata of the NationalBlend grib files (see DR 18385).

**Operational Impact:** NationalBlend data will not be ingested, and this data will not be available for use in AWIPS

**Required Behavior:** NationalBlend data is passed to EDEX for ingest (**DR 19557**)

## 6. Problem: DAF Grid request with no parameters/times results in NPE

Site noticed that starting in 16.4.1 "A getAvailableTimes() request now needs to have a parameter/level set in the request object. Otherwise, a NPE is thrown." There are some complicated performance implications with such queries but we should either throw a proper exception or make it work correctly.

**Operational Impact:** TBD

**Required Behavior:** Return times without having to enter a parameter and level and without throwing an error. (**DR 19545**)

## 7. Problem: Updating comps.xml to baseline FOSS python packages

It has been decided that the FOSS python packages will be included in a baseline install. A new group was created in the comps.xml file for these packages so they may be installed on the PXs and LXs.

**Operational Impact:** None.

**Required Behavior:** FOSS packages should be installed with baselinen install on PXs and LXs. (**DR 19537**)

## 8. Problem: Ported Java Roc Checker does not properly limit data retrieved for data limits and location data limits

Under DCS #19124, run\_rock\_checker was ported over to java. With the new java version, Roc Checker does not properly limit data retrieved for data limits and locations data limits. This can cause Out of Memory errors at sites that have a large number of data entities linked to their data



limits and location data limit records. Roc Checker should be updated to only retrieve data limits and location data limits without any of the associated data entities.

**Operational Impact:** Edex ingest is crashing due to out of memory errors and filling up log files such as /data/fxa

**Required Behavior:** Roc Checker should be updated to only retrieve data limits and location data limits without any of the associated data entities. (DR 19535)

---

### 9. Problem: GFE: Derived Parameters in GFE (DCS 18598) changes causing problems with HPCERP/TCFloodingRainThreat

After 16.4.1, MFL reported that the TCFloodingRainThreat tool is not working in GFE. This was tracked down to empty grids in the HPCERP model, which was caused by changes made under DCS 18598 in OB16.4.1. This new DR is being created since we don't fail back DCSs.

**Operational Impact:** There are problems in GFE with the HPCERP grids and the TCFloodingRainThreat tool does not work correctly.

**Required Behavior:** HPCERP model should not contain blank data and TCFlooding (DR 19529)

---

### 10. Problem: GHG Monitor missing minimize button in 16.4.1

After invoking the GHG monitor application on 16.4.1, it was noticed that the minimization button is missing; there is only a close button in the upper right portion of the GUI. Given this; the app has nowhere to go but hide behind CAVE and has been constantly popping up every 30 minutes atop my active CAVE/GFE sessions causing avoidable interruptions. In the past, we got alert viz banners prior to any product expirations and the GHG monitor would optimally remain minimized/hidden.

**Operational Impact:** The app has nowhere to go but hide behind CAVE and has been constantly popping up every 30 minutes atop my active CAVE/GFE sessions causing avoidable interruptions.

**Required Behavior:** The GHG monitor should have a minimization button. (DR 19525)

---

### 11. Problem: LSR: Event Log GUI text boxes not hidden

The following issue was reported by Raytheon testers during ad hoc testing:

In the LSR GUI, under the Event Log tab, there are a couple of text boxes in the upper right that say "cal time" which actually is local time, but in this situation they should be hidden. Testing has found that prior to the lx upgrade, they were hidden. This could potentially confuse the user.

**Operational Impact:** Could potentially confuse forecasters.



**Required Behavior:** The local time text boxes should be hidden in the Event Log display. (DR 19524)

---

**12. Problem: Alarm Display Window has no minimize button**

The minimize and maximize buttons are missing from the Alarm Display Window dialog. Should be able to position the Alarm Queue windows and minimize the Alarm Display.

**Operational Impact:** The user will not be able to Minimize the Alarm Display window.

**Required Behavior:** The user can Minimize the Alarm Display window. (DR 19523)

---

**13. Problem: Registry index changes cause postgres to crash when large text documents are stored**

Under #19424, all hash indexes were replaced with btree or spgist. These changes were required for central registry fail over support. The TNCF and BNCF registries have large text/xml entries that are 6-10 million characters. When these are replicated to child registries, it causes postgres to crash, stop all connections, and enter recovery mode. This affects all AWIPS2 access to the database. It can take 20 minutes to multiple hours for the database to recover depending on what was going on when the crash occurred.

The work around is to drop the index, but even this must be baselined as resyncing the registries causes the bad index definition to be recreated. Long term, the xml content stored in the registry needs to be put in a separate column from the other character data types.

**Operational Impact:** Postgres crashes halting all connections to the database.

**Required Behavior:** TBD (DR 19520)

---

**14. Problem: Constraints are ignored when getting available times for warning / practice warning**

For every DAF factory, `getAvailableTimes(IDataRequest)` should use any constraints on the provided request to filter the available times and only return times for data that satisfies the constraints. Warning and practice warning (both use `WarningGeometryFactory` to service requests) incorrectly ignore constraints on the request; instead they simply return all available data times. Update `getAvailableTimes` for warning so that it returns only the times for data that meets the constraints in the provided request.

**Operational Impact:** DAF warning and practice warning data requests do not always return accurate output depending on constraints used. Instead they return all available data times

**Required Behavior:** Warning and practice warning requests for `getAvailableTimes` should return correct results. (DR 19519)

---

**15. Problem: Cannot print from Text Workstation post-16.4.1**

The user is not able to print from the Text Workstation editor window in 16.4.1 and later. An error message like the one below will print on the paper and the desired text will be missing...

ERROR: undefined

OFFENDING COMMAND: 0a

STACK:

~~mark~~

false

**Operational Impact:** Not being able to make hardcopy prints from Text WS will degrade the facilitation of forecast products and discussions.

**Required Behavior:** Forecast products need to be able to print from Text WS. (DR 19518)

---

**16. Problem: Updating comps.xml for DCS 17826**

DCS 17826 creates a new rpm (awips2-edex-geodb) needed on the EDEX servers. To ensure this rpm is installed, the rpm has been added to the AWIPS II Processing Server group.

**Operational Impact:** None

**Required Behavior:** awips2-edex-geodb should be installed on EDEX servers. (DR 19516)

---

**17. Problem: DAF - GFE wind direction request return wind magnitude**

A DAF GFE query for both wind magnitude and wind direction returns wind magnitude for both. See attached test. Results are below:

Wind Direction Results:

```
dx3-tbdw { vadad }:/data/fxa/workFiles/Vada/DCS/DCS_18598-DAF 117 -> python
GFEWindVectorTest.py
```

Units are in: deg

Parameter we requested is WindDirection

(UL...UR

(LL...LR)

[[ 5. 6. 6. ..., 11. 11. 11.]

[ 4. 5. 6. ..., 11. 11. 11.]

[ 3. 4. 5. ..., 11. 11. 11.]

...,

[ 2. 2. 2. ..., 8. 8. 8.]

[ 2. 2. 2. ..., 8. 8. 8.]

[ 2. 2. 2. ..., 9. 9. 9.]]

Wind Speed Results:

```
dx3-tbdw { vadad }:/data/fxa/workFiles/Vada/DCS/DCS_18598-DAF 118 -> python
GFEWindVectorTest.py
```

Units are in: kts

Parameter we requested is Wind

(UL...UR

(LL...LR)

[[ 5. 6. 6. ..., 11. 11. 11.]

[ 4. 5. 6. ..., 11. 11. 11.]

[ 3. 4. 5. ..., 11. 11. 11.]

...,

[ 2. 2. 2. ..., 8. 8. 8.]

[ 2. 2. 2. ..., 8. 8. 8.]

[ 2. 2. 2. ..., 9. 9. 9.]]

**Operational Impact:** Incorrect data are provided for a DAF GFE request for wind direction.

**Required Behavior:** A request for wind direction should result in wind direction data. (DR 19515)

---

## 18. Problem: Update cave.sh for handling decommissioned XTs

For a newly installed LX, for example LX5-EHU, when bringing up Preferences/Text Workstation GUI by clicking on CAVE->Preferences->Text Workstation, lx5-ehu/textWs/textws.prefs under /awips2/edex/data/utility/cave\_static/workstation is created. In textws.prefs, the value corresponding workstationId is based on the exported value for environmental variable TEXTWS while running cave.sh, which is invoked while bringing up CAVE.

Right now, the value for TEXTWS is xt5-ehu if running CAVE on lx5-ehu, for example. But that's incorrect if xt5-ehu is decommissioned or for newly installed lx5-ehu that does not have a matching xt5-ehu. If there is no xt5-ehu, the value should be lx5-ehu for virtual Text Workstation brought up from CAVE on lx5-ehu.

So, cave.sh needs to be smarter to determine if there is a matching XT for a LX and to export appropriate TEXTWS value. XT\_WORKSTATIONS can be used to determine if there are XTs. Note that XT\_WORKSTATIONS might not exist if XTs are decommissioned (e.g., on those lx at eh).

**Operational Impact:** The wrong workstationId causes no WarnGen product popping up automatically on virtual Text Workstation, which delay the issuance of a warning.

**Required Behavior:** workstationId in textws.prefs should be lx5-ehu on lx5-ehu if no matching xt5-ehu, for example. (DR 19508)

---

**19. Problem: GFE: Product editor adding spaces at beginning of lines when product is edited**

WFOs Des Moines and Charleston have reported this issue with the GFE Product Editor after upgrading to OB16.4.1.

When adding or deleting characters/words, a space appears at the beginning of one or more lines following the line where edit takes place. The lines where the extra space appear can be one or more lines down from the line being edited. When deleting characters, though, the line immediately below would have an extra space when a word is pulled up to the line being edited.

An AFD product from WFO DMX is attached that shows the issue. To test, one can start with a good paragraph of text (e.g., the short term forecast in the attached AFD product) and start inserting (typing) or deleting (with backspace key) words.

**Operational Impact:** Forecaster has to check the issue and make corrections manually, which slows down issuing the products.

**Required Behavior:** Space is not to be added at the beginning of a text line. (DR 19507)

---

**20. Problem: WarnGen: Alaska Region mixed case error in nonConvective FFW template**

Alaska Region HQ (VRH) found a mixed case format error in the non Convective Flash Flood Warning template. The error affects only Alaska Region in the first bullet as follows:

\* Flash Flood Warning for...

An Ice Jam ON THE... (the text ON THE should be lower case)

!\*\*INSERT RIVER/STREAM OR AREA\*\*! in !\*\*INSERT GEO AREA\*\*!

The text is locked, therefore forecasters cannot manually change the text when issuing the product.

WarnGen mixed case is scheduled to be implemented via a software turnkey on December 6, 2016. Alaska WFOs will need to implement a site level template override to correct the error until the error is fixed in the baseline template.

The fix is very simple and very little testing will be required. If the fix is implemented in OB16.4.1, Samuel Shea at VRH can test the fix during the 16.4.1 beta test.

The error is in line 173 of file nonConvectiveFlashFloodWarning.vm:

`${hycType} ON THE...` (should be "on the")

**Operational Impact:** The incorrect nonConvective FFW first bullet upper case text is coded by WarnGen in Alaska Region. The text is locked so the forecaster cannot fix the error. This affects WFO AFC, AFG, AJK

**Required Behavior:** Correct mixed case coding. (DR 19506)

---

## 21. Problem: Post 16.4.1 Text Browser Issues

3 problems with the AWIPS text browser, the most serious is the first.

-AWIPS browser does not update when the afosMasterPIL.txt file is updated via the ndm endpoint (i. e. any new products that were added do not appear in the browser). Text ws restart and/or user logout/login don't make any difference.

-Clicking the "Help" label for the product designator column returns the help for the category column (file textNNNhelp.txt). Should display the contents of the textCCChelp.txt file.

-Clicking the "Help" label for the Site Column returns nothing. Probably should be removed.

**Operational Impact:** New products added do not appear in the browser. Help menu doesn't display the contents of the textCCChelp.txt file. Help label for the Site Column returns nothing.

**Required Behavior:** New products added appear in the browser. Help menu displays the contents of the textCCChelp.txt file. Help label for the Site Column is removed. (DR 19501)

---

## 22. Problem: GFE - Grid Manager Display Mode and some Edit Preferences pulldown menus not working

Users can select various Grid Manager display modes including Normal, History, Saved and more by pressing a down arrow next to the default button that says Normal. This down arrow is not working. Normal is the only choice available. For some, the pulldowns for GFE -> Editing Preferences -> Missing Data Mode, Vector Edit Mode and Contour Server Selection are also not working.

**Operational Impact:** Users can't use the Grid Manager display modes and Editing Preferences modes. These various modes are used frequently.

**Required Behavior:** The Grid Manager Display Mode button and Editing Preferences selections should work and allow the user to select from the available modes. (DR 19499)

---

## 23. Problem: Python Data Access Layer returns grid data with an unusable shape

The python Data Access Layer provides a 2D numpy array of data values for gridded data. Unfortunately the shape of the numpy array is transposed, and it does not line up with the data. This makes it impossible to index into the numpy array without reshaping the data. The API should return the data in a usable shape.

Here is a simplified example of the problem. Say we have the following grid of data values:

1	2	3	4
5	6	7	8
9	10	11	12

Since internally everything is 1D, the data actually looks like this:

1	2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	---	----	----	----

In numpy, c-style notation would say that the grid has a shape of (4,3). In hdf5 the data would be described with a shape of (4,3). In java the data would be in a IDataRecord with dimensions [3,4]. The problem occurs when we create a numpy array with a shape of (3,4) which causes the data to look like this:

1	2	3
4	5	6
7	8	9
10	11	12

So now even though 4 should be the value in the top right corner, it has been shifted into the next row. And 3 is in the top right corner. There is now a fourth row that shouldn't even exist. Even though DAF is returning the same data values, the shape is messed up which makes it impossible to use the data.

The following code demonstrates the problem. It demonstrates intuitive solutions for finding the data value in the top right corner, all of which fail because of the invalid shape. It also shows how reshaping the data corrects the problem.

**Operational Impact:** DAF is returning the correct grid data values, but the shape is incorrect which makes the data unusable. Any local application using the DAF to retrieve grid data will be impacted.

**Required Behavior:** The DAF needs to return data values that produce the correct shape. (DR 19482)

---

## 24. Problem: Get UELE When Logging Back into Collaboration With autoFloat and autoAttach Enabled

An "Unhandled event loop exception is given when a user immediately logs back onto Collaboration after logging out with both the "Auto attach new tabs to existing tabs" and "Auto float tabs on login" options are enabled. This error also prevents the user from joining rooms (i.e. nws-collaboration) that are automatically joined upon starting Collaboration.

```

Unhandled event loop exceptionorg.eclipse.e4.core.di.InjectionException: java.lang.NullPointerException
at org.eclipse.e4.core.internal.di.MethodRequestor.execute(MethodRequestor.java:68)
at org.eclipse.e4.core.internal.di.InjectorImpl.invokeUsingClass(InjectorImpl.java:252)
at org.eclipse.e4.core.internal.di.InjectorImpl.invoke(InjectorImpl.java:234)
at org.eclipse.e4.core.contexts.ContextInjectionFactory.invoke(ContextInjectionFactory.java:132)
at org.eclipse.e4.core.commands.internal.HandlerServiceHandler.execute(HandlerServiceHandler.java:152)
at org.eclipse.core.commands.Command.executeWithChecks(Command.java:493)
at org.eclipse.core.commands.ParameterizedCommand.executeWithChecks(ParameterizedCommand.java:486)
at org.eclipse.e4.core.commands.internal.HandlerServiceImpl.executeHandler(HandlerServiceImpl.java:210)
at org.eclipse.e4.ui.workbench.renderers.swt.HandledContributionItem.executeItem(HandledContributionItem.java:799)
at org.eclipse.e4.ui.workbench.renderers.swt.HandledContributionItem.handleWidgetSelection(HandledContributionItem.java:675)
at org.eclipse.e4.ui.workbench.renderers.swt.HandledContributionItem.access$7(HandledContributionItem.java:659)
at org.eclipse.e4.ui.workbench.renderers.swt.HandledContributionItem$4.handleEvent(HandledContributionItem.java:592)
at org.eclipse.swt.widgets.EventTable.sendEvent(EventTable.java:84)
at org.eclipse.swt.widgets.Display.sendEvent(Display.java:5879)
at org.eclipse.swt.widgets.Widget.sendEvent(Widget.java:1356)
at org.eclipse.swt.widgets.Display.runDeferredEvents(Display.java:5182)
at org.eclipse.swt.widgets.Display.readAndDispatch(Display.java:4771)
at org.eclipse.e4.ui.internal.workbench.swt.PartRenderingEngine$4.run(PartRenderingEngine.java:1127)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:337)
at org.eclipse.e4.ui.internal.workbench.swt.PartRenderingEngine.run(PartRenderingEngine.java:1018)
at org.eclipse.e4.ui.internal.workbench.E4Workbench.createAndRunUI(E4Workbench.java:156)
at org.eclipse.ui.internal.Workbench$5.run(Workbench.java:654)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:337)
at org.eclipse.ui.internal.Workbench.createAndRunWorkbench(Workbench.java:598)
at org.eclipse.ui.PlatformUI.createAndRunWorkbench(PlatformUI.java:150)
at com.raytheon.uf.viz.personalities.cave.component.CAVEApplication.startComponent(CAVEApplication.java:186)
at com.raytheon.uf.viz.application.VizApplication.start(VizApplication.java:97)
at org.eclipse.equinox.internal.app.EclipseAppHandle.run(EclipseAppHandle.java:196)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.runApplication(EclipseAppLauncher.java:134)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.start(EclipseAppLauncher.java:104)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:380)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:235)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.eclipse.equinox.launcher.Main.invokeFramework(Main.java:669)
at org.eclipse.equinox.launcher.Main.basicRun(Main.java:608)
at org.eclipse.equinox.launcher.Main.run(Main.java:1515)
at org.eclipse.equinox.launcher.Main.main(Main.java:1488)
Caused by: java.lang.NullPointerException
at com.raytheon.viz.ui.views.DetachPart.detach(DetachPart.java:133)
at com.raytheon.viz.ui.views.CaveWorkbenchPageManager.floatView(CaveWorkbenchPageManager.java:128)
at com.raytheon.uf.viz.collaboration.ui.CollaborationView.showView(CollaborationView.java:1065)
at com.raytheon.uf.viz.collaboration.ui.actions.CollaborationViewAction.execute(CollaborationViewAction.java:73)
at org.eclipse.ui.internal.handlers.HandlerProxy.execute(HandlerProxy.java:295)
at org.eclipse.ui.internal.handlers.E4HandlerProxy.execute(E4HandlerProxy.java:90)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.eclipse.e4.core.internal.di.MethodRequestor.execute(MethodRequestor.java:56)

```

... 39 more

**Operational Impact:** The user will have to manually join tabs that are automatically joined upon starting Collaboration.

**Required Behavior:** An error should not given when the user immediately logs back onto Collaboration and all auto tabs should open upon Collaboration starting. (DR 19467)



---

**25. Problem: Grid Netcdf Decoder does not handle data with WMO headers**

This issue was reported by Lee Byerle who is working on getting gridded IMERG precip working. This data will be transmitted over the SBN with a WMO header, and the grid netcdf decoder is not handling the data.

There is already a bean for pointset and goesr that handles WMO headers for netcdf data types. One line of xml will need to be added to the grid spring route.

**Operational Impact:** Gridded IMERG data is not handled by the grid netcdf decoder, therefore, the data is not getting processed.

**Required Behavior:** netcdf decoder should be able to handle IMERG data. (DR 19465)

---

**26. Problem: Database backup script does not work with new roles and permissions**

With the database user changes for DCS #19131 in 16.4.1, the 'awips' user account is no longer a database super user. The database backup script, /awips/ops/bin/backup\_pgdb\_a2, still try to do its work as user 'awips'. That fails for some databases for which 'awips' has no permissions.

Also TT 103046.

**Operational Impact:** No immediate impact, but disaster recovery would be impacted.

**Required Behavior:** Databases should be correctly backed up by the script. (DR 19457)

---

**27. Problem: WarnGen: impactSevereWeatherStatement.vm misspelling and grammatical error**

TSA found two more issues in baseline impactSevereWeatherStatement.vm that are beyond the ones resolved in DR 19144 and 19177:

- 1) In the "wind still a threat" section (near line 275), "ever" should be changed to "severe".
- 2) In the "historyWindCTA" section (near line 1115), the change notes tell you change "sSek" to "Seek" in mixed case, but according to section A.4.5.1.c. of the change notes, as well as other instances of the phrase "Seek shelter now" in the same file, the line should read "SEEK SHELTER NOW", in all caps.

**Operational Impact:** The errors will delay the issuance of the warning as the forecaster has to manually correct them.

**Required Behavior:** "ever" should be "severe" in line 275 and "Seek shelter now" in line 1115 should be in all upper case. (DR 19456)



---

**28. Problem: TextWS autostart for new LX workstations being lost**

The regular CAVE installs are overwriting the special /etc/xdg/autostart/awips2-textws.desktop file supplied with the LX replacements for the 19" monitor. It needs to be baselined. Found at sites WNCf (16.2.2), EHU and VUY (16.4.1).

**Operational Impact:** TextWS autostart does not work

**Required Behavior:** TextWS autostart works (**DR 19455**)

---

**29. Problem: 16.2.2 - pqact.conf.template – incorrect radar entry**

This added an additional parenthetical in the second line of the entry - pqact.conf.template.

It is currently:

```
FILE -overwrite -log -close -edex
/data_store/radar/(\4:yyyy)(\4:mm)(\4)\5\2\8\7\1_\4\5\6_\2\8_\7_(seq).rad
```

It should be changed to:

```
FILE -overwrite -log -close -edex
/data_store/radar/(\4:yyyy)(\4:mm)4\5\2\8\7\1_\4\5\6_\2\8_\7_(seq).rad
```

This is more than an archiving issue. Basically, it will create two sets of data [20161013 and 201610(13)] on radar directory. See below for details.

```
dx1-wncf{aocuser} 130: pwd
```

```
/data_store/radar
```

```
dx1-wncf{aocuser} 131: ls
```

```
20161013 201610(13) 20161014 201610(14)
```

Operationally, the user will not see any pops up (note, this is not a GUI issue). Basically, LDM feed duplicates radar directories like 20161013 and 201610(13). It's hourly data and it will take lots of disk space.

**Operational Impact:** No impact on use of data operationally, but raw data storage should be cleaned up to be consistent with other data, otherwise it will take lots of disk space.

**Required Behavior:** Raw radar data should be stored in /data\_store/radar/<YYYYMMDD>/<HH> structure. (DR 19449)

---

### 30. Problem: D-2D radar storm relative velocity (SRM) display may display incorrectly

When initially loading or when auto-updating a D-2D radar SRM display, the values may be incorrect. The storm motion appear to exaggerated by a factor of two and the resulting radial velocity values look unreasonable. For auto-updates this may not occur every frame. When testing on a development system, initially loaded data was always incorrect.

It is possible to correct the display by changing the motion source in the Radar Display Controls dialog and then changing back to the original setting.

**Operational Impact:** Reduced ability to see mesocyclone/tornado activity unless the workaround is used. However, that workaround takes time and will delay forecaster activity.

**Required Behavior:** The SRM display should show the correct values. (DR 19447)

---

### 31. Problem: GFE: Formatter launcher freeze occurs in certain case

Several sites (MFL, PUB, BRO, GYX, OKX, AKQ) have reported the following issue since OB16.2.2:

When opening up two or more text formatters in succession without first making selections in the GUI before moving to the next formatter, when coming back to the first formatter, the GUI can freeze.

The workaround is to click the Gear button and then deal with the new GUI before moving on to the next product.

Below are the steps the test team found that could reproduce the problem:

- Load Formatter Launcher.
- Load Civil Emergency EQR Formatter
- Load ZFP Formatter
- Click back on Civil Emergency EQR Formatter tab click the Gear button (A GUI may pop up here - if it does, ignore it)

- Click on the ZFP tab
- Click the gear button in the ZFP Formatter tab (A GUI may pop up here - if it does, ignore it)
- Click back on the Civil Emergency EQR Formatter tab
- Move the Formatter window to the side to expose the ignored GUI from before. Click OK on the GUI
- Once you click OK, another GUI should display - this one for the ZFP product.
- Try and click OK here - this is where it freezes.

**Operational Impact:** Formatter launcher can freeze resulting in lost work and time.

**Required Behavior:** Formatter launcher should not freeze even when running multiple formatters in succession. (DR 19446)

---

### 32. Problem: DAF - limit by envelope broken for grid datatype requests

The Data Access Framework can be used to request gridded data for a given area (envelope). This capability was broken with 16.4.1 DCS 18598. When requesting grid data for a lat/lon bounded area the data returned are not confined to the bounded area.

**Operational Impact:** Grid data cannot be requested for a given area (envelope). Data are returned, but are not confined to the requested area.

**Required Behavior:** Users should be able to retrieve gridded data for a specified envelope. (DR 19444)

---

### 33. Problem: Jar conflict present with Data Delivery crawler plugin and AWIPS2 FOSS plugin

The org.objectweb plugin in the AWIPS2 FOSS repository and the edu.uci.ics.crawler4j plugin in the Data Delivery repository both deploy a version of asm.jar. The presence of 2 versions of the same jar is causing the ebxml registry to not start up correctly. The stack trace shown in the file attached to this ticket is produced when both jars are present in the EDEX classpath upon registry startup.

The ebxml registry starts correctly and without error when the asm-3.1 jar is removed from the edu.uci.ics.crawler4j plugin but the asm.jar remains in the org.objectweb plugin. Although this appears to fix the problem, further investigation is necessary to determine if this is indeed the correct solution and Data Delivery still functions as expected.

This is a high priority ticket since this causes the registry to start incorrectly, thereby making the registry unavailable to both Data Delivery and Hazard Services.

**Operational Impact:** The ebxml registry does not always start up correctly causing registry to be unavailable to both Data Delivery and Hazard Services.

**Required Behavior:** ebxml registry should start without error and be available for Data Delivery connections. (DR 19419)

---

### 34. Problem: DAF hydro and climate requests for `getAvailableTimes` and `getAvailableLocationNames` do not use all fields

In reviewing DAF unit tests for the hydro and climate data types, some issues were discovered with the `ClimateGeometryFactory` and `HydroGeometryFactory` classes:

1. For hydro: calling `getAvailableLocationNames` will only return the entries from the location table regardless of whether a different table has been specified in the request. This creates the possibility that location names will be returned for which there are no entries in the specified table. This caused test `GetGeometryDataWithLocationSpecified` to always return an empty collection of results.
2. For climate: calling `getAvailableTimes` will return all valid times for the specified table regardless of other constraints set on the request, like location name. This creates the possibility of returning times for which there will be no data returned if `getGeometryData` is called using the same request parameters. This caused the test `testGetDataWithInGenerator` and similar unit tests to always return an empty collection of results.
3. For climate: calling `getAvailableLocationNames` will return all valid location names for the specified table regardless of other constraints set on the request. This creates the possibility of returning locations for which there will be no data returned if `getGeometryData` is called using the same request parameters. This caused the unit test `testGetDataWithGreaterThan` and similar tests to always return an empty collection of results.

**Operational Impact:** DAF climate and hydro data requests do not always return accurate output depending on constraints used.

**Required Behavior:** Hydro and Climate requests for `getAvailableTimes` and `getAvailableLocationNames` should return correct results (DR 19416)

---

### 35. Problem: 16.4.1 - `pqact.conf.template` – incorrect binlightning entry

For DCS 19202, the binlightning pattern in `pqact.conf.template` was changed from

```
HDS ^\SF(US|PA)41) ([A-Z]{4}) (..)(..)(..)
```

to

```
HDS ^\SF(US|PA)(41|43)) ([A-Z]{4}) (..)(..)(..)
```

This added an additional parenthetical, but the number sequencing in the second line of the entry was not shifted accordingly.

It is currently:

```
FILE -overwrite -log -edex -close
\data_store/binlightning/(4:yyyy)(4:mm)4\5\1_3_4\5\6_(seq).nldn.%Y% m% d%H
```

It should be changed to:

```
FILE -overwrite -log -edex -close
\data_store/binlightning/(5:yyyy)(5:mm)5\6\1_4_5\6\7_(seq).nldn.%Y% m% d%H
```

The result of the incorrect pattern is that the binlightning raw data storage looks like:

```
/data_store/binlightning/
(KWBC:yyyy)(KWBC:mm)KWBC/30/SFUS41_41_KWBC3018_216069249.nldn.2016093018
```

When it should look like:

```
/data_store/binlightning/20160930/18/SFUS41_KWBC_301841_216099914.nldn.2016093018
```

The data is still decoded and stored successfully, but the raw data storage is not in the expected structure.

**Operational Impact:** No impact on use of data operationally, but raw data storage should be cleaned up to be consistent with other data.

**Required Behavior:** Raw binlightning data should be stored in /data\_store/binlightning/<YYYYMMDD>/<HH> structure. (DR 19412)

---

### 36. Problem: Update LAPS-MSAS install scripts to account for move of all base grib model files

Update two scripts that are impacted by the move of files from edex\_static to common\_static:

1.installA2DX3.csh

2.repairLAPS.csh

**Operational Impact:** installA2DX3.csh and repairLAPS.csh will fail.

**Required Behavior:** installA2DX3.csh should perform the part of the install that needs to occur on dx3. repairLAPS.csh is used to fix certain problems with the Laps related xml config files in the case where Laps grids are not storing. (DR 19402)

---

**37. Problem: LSR - Saving new events fail**

New Local Storm Reports events cannot be submitted. The user gets an "EVENT SAVE UNSUCCESSFUL!!" message when trying to save a new event.

In testing a manual insert into the LSR event\_report table, user awips failed but user awipsadmin was successful.

**Operational Impact:** LSR fails to save new events. Local Storm Reports cannot be submitted without this change.

**Required Behavior:** Users should be able to create new Local Storm Reports. (DR 19401)

---

**38. Problem: The "Assign Transmitter Group(s)..." dialog in BMH is not sized correctly and is missing buttons**

The "Assign Transmitter Group(s)..." dialog is too long relative to the screen length and the buttons can not be seen at the bottom of the window. This gui sizing issue is related to the LX upgrade and the problem can be reproduced as far back as 16.2.2.

**Operational Impact:** The forecaster will not be able to add a transmitter to a program and the associated weather messages will not play for the desired program suite.

**Required Behavior:** Transmitters need to be able to be assigned to different broadcast programs. (DR 19399)

---

**39. Problem: Modifications needed for the backup and deploy scripts for LSR mixed case**

During installation Env found the following changes need to be made to the LSR backup and deploy scripts.

Script changes:

1. In the backup script (backupConfigFiles.sh) and the deploy script (deployConfigFiles.sh) remove the prompts to continue. The scripts are not run manually so there cannot be a prompt required.
2. In the backup script the files should be renamed to a date format \$( date +%Y%m%d\_%H%M%S ) rather than .orig so that a subsequent run won't overwrite the backups.
3. Remove files that already exist and that are unchanged from the deploy scripts. Including these files causes errors in script output.

**Operational Impact:** There will be problems installing the LSR mixed case changes in the 16.4.1 installation without these script changes.

**Required Behavior:** Installation scripts that are run automatically as part of the larger install cannot include manual prompts. Backed up files should not be overwritten if install steps must be run again. (DR 19391)

---

#### **40. Problem: Database Authentication Prevents Import of GeoJSON Files Into Maps Database**

The import script for GeoJSON files fails to add files to maps database due to the postgresql authentication change.

**Operational Impact:** N/A

**Required Behavior:** The script should successfully import GeoJSON files with the correct database authentication. (DR 19389)

---

#### **41. Problem: CAVE crashes to desktop when trying to load sounding data from the volume browser in D2D**

CAVE crashes to the desktop when the user attempts to load several soundings from the volume browser in D2D. The issue can be reproduced when choosing multiple sounding points from the "Planes" field (i.e. A, B, C, etc.) in conjunction with any one of the Bufr points from the "Sources" field (i.e. PoesBufr, NAMBufr). The program will terminate without any alertviz errors before the available products become listed in the inventory section of the volume browser. The problem occurs on both the new (Z640) and old (Z620) workstations and happens regardless of whether CAVE is loaded on the middle or right monitor. Testing has shown that this is only an issue on 16.2.1 and 16.2.2. Please refer to tickets 100200 (LIX) and 100657 (ILM) for additional details on this issue.

**Operational Impact:** The forecaster will not have access to the needed sounding data which will hinder the forecast process.

**Required Behavior:** Sounding data should load from within the volume browser. (DR 19386)

---

#### **42. Problem: Dialogs are not properly centered after Eclipse 4 upgrade**

BCQ site reported all sort of dialogs were not parented correctly, appearing on different monitors or even split across the two 27" monitors. The issue is much more prominent on the dual X display configuration. Below are a list of the dialogs BCQ reported to be a problem, but there are many others as well.

- Open Procedure
- Delete Confirmation Dialog
- Alter Procedure
- Image Properties
- Print Dialog

- FFMP Attributes
- SCAN Cell Table
- DMD Icons Table
- Set Background Color
- FOG, SAFESEAS, SNOW Attributes Dialog
- FOG, SAFESEAS, SNOW Configure Thresholds Open & Save As Dialogs from File Menu
- Export Image
- FOG, SAFESEAS, SNOW Configure Thresholds Dialog
- Obs->Collection/Dissemination
- Popup SkewT

**Operational Impact:** Many dialogs do not pop up over CAVE, rather pop up over an available area on the desktop.

**Required Behavior:** Dialogs should be properly parented. (DR 19385)

---

### 43. Problem: GFE: Unable to apply zone combinations for text formatters

WFO RNK site reported that forecasters were getting errors in GFE when trying to save their zone combinations when running formatters. They get an error saying "Error saving combination file".

Stack traces found in log files indicated a permissions issue:

```
Error saving combinations file: gfe/combinations/Combinations_NOW_RNK.py
Error saving combinations file: gfe/combinations/Combinations_NOW_RNK.pyjava.io.IOException: Error saving output stream
at com.raytheon.uf.common.localization.LocalizationSaveableFileOutputStream.save(LocalizationSaveableFileOutputStream.java:87)
at com.raytheon.viz.gfe.textformatter.CombinationsFileUtil.generateAutoCombinationsFile(CombinationsFileUtil.java:355)
at com.raytheon.viz.gfe.dialogs.formatterlauncher.ZoneCombinerComp.applyZoneCombo(ZoneCombinerComp.java:823)
at com.raytheon.viz.gfe.dialogs.formatterlauncher.ZoneCombinerComp$21.widgetSelected(ZoneCombinerComp.java:797)
at org.eclipse.swt.widgets.TypedListener.handleEvent(TypedListener.java:248)
at org.eclipse.swt.widgets.EventTable.sendEvent(EventTable.java:84)
at org.eclipse.swt.widgets.Widget.sendEvent(Widget.java:1276)
at org.eclipse.swt.widgets.Display.runDeferredEvents(Display.java:3562)
at org.eclipse.swt.widgets.Display.readAndDispatch(Display.java:3186)
at org.eclipse.ui.internal.Workbench.runEventLoop(Workbench.java:2701)
at org.eclipse.ui.internal.Workbench.runUI(Workbench.java:2665)
```



```

at org.eclipse.ui.internal.Workbench.access$4(Workbench.java:2499)
at org.eclipse.ui.internal.Workbench$7.run(Workbench.java:679)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:332)
at org.eclipse.ui.internal.Workbench.createAndRunWorkbench(Workbench.java:668)
at org.eclipse.ui.PlatformUI.createAndRunWorkbench(PlatformUI.java:149)
at com.raytheon.uf.viz.personalities.cave.component.CAVEApplication.startComponent(CAVEApplication.java:174)
at com.raytheon.uf.viz.application.VizApplication.start(VizApplication.java:97)
at org.eclipse.equinox.internal.app.EclipseAppHandle.run(EclipseAppHandle.java:196)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.runApplication(EclipseAppLauncher.java:110)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.start(EclipseAppLauncher.java:79)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:353)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:180)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:57)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:606)
at org.eclipse.equinox.launcher.Main.invokeFramework(Main.java:629)
at org.eclipse.equinox.launcher.Main.basicRun(Main.java:584)
at org.eclipse.equinox.launcher.Main.run(Main.java:1438)
at org.eclipse.equinox.launcher.Main.main(Main.java:1414)

```

Caused by: com.raytheon.uf.common.localization.exception.LocalizationPermissionDeniedException: Insufficient permissions to modify cave\_static.site.RNK/gfe/combinations/Combinations\_NOW\_RNK.py

```

at com.raytheon.uf.viz.core.localization.LocalizationRestConnector.restPutFile(LocalizationRestConnector.java:254)
at com.raytheon.uf.viz.core.localization.LocalizationManager.upload(LocalizationManager.java:811)
at com.raytheon.uf.viz.core.localization.CAVELocalizationAdapter.save(CAVELocalizationAdapter.java:270)
at com.raytheon.uf.common.localization.LocalizationFile.save(LocalizationFile.java:472)
at com.raytheon.uf.common.localization.LocalizationFileOutputStream.closeAndSave(LocalizationFileOutputStream.java:73)
at com.raytheon.uf.common.localization.LocalizationSaveableFileOutputStream.save(LocalizationSaveableFileOutputStream.java:85)

```

... 30 more

%% %%

The permission for the gfe/combinations directory was added to userRoles.xml under DR 18926. It needs to be added to the "ALL" user.

**Operational Impact:** Not able to issue text products.

**Required Behavior:** All users should be able to change the zone combinations for text formatters and generate text products based on the zone combinations. **(DR 19381)**

---

**44. Problem: Eclipse 4: Menu items carry over to different perspectives when CAVE is launched with -perspective**

BCQ reported the following:

"I frequently use cave.sh -perspective to open specific perspectives (e.g. localization). Prior to 16.3.1, this worked well, and only the specified perspective would open. Now, if I use '-perspective localization', for example, I have perspective buttons shown for both D2D and GFE on the right side of the toolbar."

This issue is repeatable, but not consistently. It is also true that if you launch CAVE using -perspective, then switch perspectives, menu items carry over into the new perspective.

**Operational Impact:** Menu items from one perspective carry over into other perspectives when CAVE is launched using '-perspective'.

**Required Behavior:** There should be no perspective buttons/tabs shown in the toolbar when CAVE is launched using the -perspective flag. Also, menu items should not carry over from one perspective to the other. (DR 19377)

---

**45. Problem: BMH: add 3 bytes of padding to SAME tone**

This is to add 3 bytes of padding to the SAME tone and the END tone.

This will more correctly duplicate the CRS generated signal.

This will be done to the dactransmit.sh script using these two tags.

1. Use to adjust the amount of padding bytes at the end of the SAME Tones.

```
SAME_PADDING=0
```

```
SAME_EOM_PADDING=0
```

Changed to:

1. Use to adjust the amount of padding bytes at the end of the SAME Tones.

```
SAME_PADDING=3
```

```
SAME_EOM_PADDING=3
```

**Operational Impact:** Some weather radios will not alert properly without this.

**Required Behavior:** That all weather radios alert when receiving the tones. (DR 19367)

---

**46. Problem: Eclipse4: An extra blank window appears along with the Contact Request dialog in Collaboration**

When a user adds another user to their personal contact list, a Contact Request dialog appears on the other user's workstation...allowing them to Allow or Deny the request. Along with that dialog, a blank window also appears. This is an issue associated with the Eclipse 4 upgrade.

**Operational Impact:** No operational impact besides annoyance of extra dialog.

**Required Behavior:** Only the the Allow/Deny dialog should appear. There should not be an extra blank dialog. **(DR 19365)**

---

#### **47. Problem: Archiver case creation GUI not able to save Radar data for the national mosaics**

The issue has to do with the storage of the radar data that comprise the new national mosaics. Here is /data\_store/radar at an affected site:

```
drwxrwxr-- 7 ldm fxalpha 4096 Sep 8 18:51 20160901
drwxrwxr-- 26 ldm fxalpha 4096 Sep 2 23:01 20160902
drwxrwxr-- 26 ldm fxalpha 4096 Sep 3 23:01 20160903
drwxrwxr-- 26 ldm fxalpha 4096 Sep 4 23:00 20160904
drwxrwxr-- 26 ldm fxalpha 4096 Sep 5 23:00 20160905
drwxrwxr-- 26 ldm fxalpha 4096 Sep 6 23:00 20160906
drwxrwxr-- 15 ldm fxalpha 4096 Sep 7 00:01 201609(06)
drwxrwxr-- 26 ldm fxalpha 4096 Sep 7 23:00 20160907
drwxrwxr-- 26 ldm fxalpha 4096 Sep 7 23:00 201609(07)
drwxrwxr-- 23 ldm fxalpha 4096 Sep 8 20:00 20160908
drwxrwxr-- 23 ldm fxalpha 4096 Sep 8 20:00 201609(08)
drwxrwxrwx 2 fxa fxalpha 4096 Apr 6 2015 fsi
drwxrwxrwx 47 awips fxalpha 4096 Sep 6 12:21 kbgm
drwxrwxrwx 2 awips fxalpha 4096 Apr 6 2015 lists
```

The directories with the parentheses are the ones in error, and they contain the radar data for the national mosaics. With these directory names, the archiver case creation GUI would not be able to save this data in a case. The issue is a small typo in the pqact.conf file:

1.National Radar for DCS 18425 / DR 18913

```
NNEXRAD ^(SDUS234578.) (K|P|T)(...) (..)(..)(..)
/p(N0Q|N1Q|N0U|N1U|NST|TZL|TR1|TV1|NCR)(...)
```

```
FILE -overwrite -log -close -edex
/data_store/radar/(\4:yyyy)(\4:mm)(\4)\5\2\8\7\1_\4\5\6_\2\8_\7_(seq).rad
```

should be:

```
FILE -overwrite -log -close -edex  
/data_store/radar/(4:yyyy)(4:mm)4\5\2\8\7\1_4\5\6_2\8_7_(seq).rad
```

Note the two parentheses around the "4/" have been removed.

The fix is to remove these two extra parentheses.

(Note: DR updated to indicate correctly what needs to be changed.)

**Operational Impact:** Archiver case creation GUI not able to save Radar data for the national mosaics affecting warning decision.

**Required Behavior:** See Description. (DR 19364)

---

#### 48. Problem: GFE: HLS/TCV formatter logs should log for insufficient grid inventory

During Hurricane Hermine there were a couple of reports of insufficient grid inventory when running the TCV formatter in GFE, when in fact the grids actually existed. The problem disappeared after a CAVE restart in both cases. If this issue occurs in the future we need to be able to see the problem in the logs.

**Operational Impact:** None as this pertains only to logging.

**Required Behavior:** Insufficient grid inventory should be logged in the HLS and TCV formatter logs when it occurs. (DR 19363)

---

#### 49. Problem: GFE NWPS - Correct errors and omissions in serverConfig.py and nwpsCG1 smartInit

The following issues need to be corrected for the Nearshore Wave Prediction System (NWPS) grids to process and store correctly:

1. Correct syntax error at line 32 in the nwpsCG1.py smartInit.
2. Remove Wind calculation starting at line 41 in the nwpsCG1.py smartInit.
3. Add SigWavHgt vector marine parameter definition in baseline serverConfig.py
4. Add SigWavHgt to the Fcst/Official parm lists with time constraint TC1 in serverConfig.py
5. Add SigWavHgt to the baseline nspwCG1\_MODEL parameter list.

These issues were found while testing 16.4.1 DCS 18590. The changes have been tested successfully on TBDW.

**Operational Impact:** Without the syntax error fix, the nwpsCG1 smartinit will fail to run. If the syntax error is corrected and the nwpsCG1 smartInit runs, SigWavHgt calculation and display fails.

**Required Behavior:** The smartInit should run without error. All required parameters should be calculated and displayable. (DR 19356)

## 50. Problem: pguser Name Needs to be Updated in .Apps\_Default\_site File

The PSQL permissions have changed from 'awips' to 'awipsadmin'. The .Apps\_defaults\_site file currently still uses 'awips' for pguser which prevents the RiverPro app from launching. This file needs to be updated in the baseline.

**Operational Impact:** With an incorrect pguser name set in .Apps\_default\_site file the user is unable to launch RiverPro.

**Required Behavior:** The pguser name should be set to the correct name in .Apps\_default\_site which will allow the user to launch RiverPro. (DR 19346)

## 51. Problem: Trying to Save a PDA Subset in Data Delivery Throws an Alertviz Error

When the user clicks on the Saved Subsets tab in the Data Delivery Subset Manager dialog and tries to save the subset, a javax.xml.bind.MarshalException error is thrown. The Subset Name chosen does not appear in the list of saved subsets. See the error message below.

```

nulljavax.xml.bind.MarshalException
- with linked exception:
[com.sun.istack.internal.SAXException2: unable to marshal type
"com.raytheon.uf.viz.datadelivery.subscription.subset.xml.PDATimeXML" as an element because it is not known to this
context.]
at com.sun.xml.internal.bind.v2.runtime.MarshallerImpl.write(MarshallerImpl.java:311)
at com.sun.xml.internal.bind.v2.runtime.MarshallerImpl.marshal(MarshallerImpl.java:236)
at javax.xml.bind.helpers.AbstractMarshallerImpl.marshal(AbstractMarshallerImpl.java:103)
at com.raytheon.uf.viz.datadelivery.subscription.subset.SubsetFileManager.saveSubset(SubsetFileManager.java:320)
at com.raytheon.uf.viz.datadelivery.subscription.subset.SubsetManagerDlg.handleSaveSubset(SubsetManagerDlg.java:786)
at com.raytheon.uf.viz.datadelivery.subscription.subset.SavedSubsetTab.handleSaveSubset(SavedSubsetTab.java:216)
at com.raytheon.uf.viz.datadelivery.subscription.subset.SavedSubsetTab.access$1(SavedSubsetTab.java:215)
at com.raytheon.uf.viz.datadelivery.subscription.subset.SavedSubsetTab$2.widgetSelected(SavedSubsetTab.java:148)
at org.eclipse.swt.widgets.TypedListener.handleEvent(TypedListener.java:248)
at org.eclipse.swt.widgets.EventTable.sendEvent(EventTable.java:84)
at org.eclipse.swt.widgets.Display.sendEvent(Display.java:4481)
at org.eclipse.swt.widgets.Widget.sendEvent(Widget.java:1329)
at org.eclipse.swt.widgets.Display.runDeferredEvents(Display.java:3819)
at org.eclipse.swt.widgets.Display.readAndDispatch(Display.java:3430)
at com.raytheon.viz.ui.dialogs.CaveSWTDiaLog.open(CaveSWTDiaLog.java:380)
at com.raytheon.uf.viz.datadelivery.actions.DataBrowserAction.execute(DataBrowserAction.java:83)
at org.eclipse.ui.internal.handlers.HandlerProxy.execute(HandlerProxy.java:295)
at org.eclipse.ui.internal.handlers.E4HandlerProxy.execute(E4HandlerProxy.java:90)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.eclipse.e4.core.internal.di.MethodRequestor.execute(MethodRequestor.java:56)
at org.eclipse.e4.core.internal.di.InjectorImpl.invokeUsingClass(InjectorImpl.java:252)
at org.eclipse.e4.core.internal.di.InjectorImpl.invoke(InjectorImpl.java:234)
at org.eclipse.e4.core.contexts.ContextInjectionFactory.invoke(ContextInjectionFactory.java:132)
at org.eclipse.e4.core.commands.internal.HandlerServiceHandler.execute(HandlerServiceHandler.java:152)
at org.eclipse.core.commands.Command.executeWithChecks(Command.java:493)
at org.eclipse.core.commands.ParameterizedCommand.executeWithChecks(ParameterizedCommand.java:486)
at org.eclipse.e4.core.commands.internal.HandlerServiceImpl.executeHandler(HandlerServiceImpl.java:210)
at org.eclipse.e4.ui.workbench.renderers.swt.HandledContributionItem.executeItem(HandledContributionItem.java:799)

```

```

at
org.eclipse.e4.ui.workbench.renderers.swt.HandledContributionItem.handleWidgetSelection(HandledContributionItem.java:675)
at org.eclipse.e4.ui.workbench.renderers.swt.HandledContributionItem.access$7(HandledContributionItem.java:659)
at org.eclipse.e4.ui.workbench.renderers.swt.HandledContributionItem$4.handleEvent(HandledContributionItem.java:592)
at org.eclipse.swt.widgets.EventTable.sendEvent(EventTable.java:84)
at org.eclipse.swt.widgets.Display.sendEvent(Display.java:4481)
at org.eclipse.swt.widgets.Widget.sendEvent(Widget.java:1329)
at org.eclipse.swt.widgets.Display.runDeferredEvents(Display.java:3819)
at org.eclipse.swt.widgets.Display.readAndDispatch(Display.java:3430)
at org.eclipse.e4.ui.internal.workbench.swt.PartRenderingEngine$4.run(PartRenderingEngine.java:1127)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:337)
at org.eclipse.e4.ui.internal.workbench.swt.PartRenderingEngine.run(PartRenderingEngine.java:1018)
at org.eclipse.e4.ui.internal.workbench.E4Workbench.createAndRunUI(E4Workbench.java:156)
at org.eclipse.ui.internal.Workbench$5.run(Workbench.java:654)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:337)
at org.eclipse.ui.internal.Workbench.createAndRunWorkbench(Workbench.java:598)
at org.eclipse.ui.PlatformUI.createAndRunWorkbench(PlatformUI.java:150)
at com.raytheon.uf.viz.personalities.cave.component.CAVEApplication.startComponent(CAVEApplication.java:186)
at com.raytheon.uf.viz.application.VizApplication.start(VizApplication.java:97)
at org.eclipse.equinox.internal.app.EclipseAppHandle.run(EclipseAppHandle.java:196)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.runApplication(EclipseAppLauncher.java:134)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.start(EclipseAppLauncher.java:104)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:380)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:235)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.eclipse.equinox.launcher.Main.invokeFramework(Main.java:669)
at org.eclipse.equinox.launcher.Main.basicRun(Main.java:608)
at org.eclipse.equinox.launcher.Main.run(Main.java:1515)
at org.eclipse.equinox.launcher.Main.main(Main.java:1488)
Caused by: com.sun.istack.internal.SAXException2: unable to marshal type
"com.raytheon.uf.viz.datadelivery.subscription.subset.xml.PDATimeXML" as an element because it is not known to this context.
at com.sun.xml.internal.bind.v2.runtime.XMLSerializer.reportError(XMLSerializer.java:234)
at com.sun.xml.internal.bind.v2.runtime.ClassBeanInfoImpl.serializeRoot(ClassBeanInfoImpl.java:323)
at
com.sun.xml.internal.bind.v2.runtime.property.SingleReferenceNodeProperty.serializeBody(SingleReferenceNodeProperty.java:
100)
at com.sun.xml.internal.bind.v2.runtime.ClassBeanInfoImpl.serializeBody(ClassBeanInfoImpl.java:345)
at com.sun.xml.internal.bind.v2.runtime.XMLSerializer.childAsSoleContent(XMLSerializer.java:578)
at com.sun.xml.internal.bind.v2.runtime.ClassBeanInfoImpl.serializeRoot(ClassBeanInfoImpl.java:326)
at com.sun.xml.internal.bind.v2.runtime.XMLSerializer.childAsRoot(XMLSerializer.java:479)
at com.sun.xml.internal.bind.v2.runtime.MarshallerImpl.write(MarshallerImpl.java:308)
... 61 more

```

**Operational Impact:** The forecaster will not be able to quickly recall subscription information, causing a loss of time when the settings have to be manually entered a second time.

**Required Behavior:** The user should be able to save data within a subset for future reference.  
(DR 19341)

---

## 52. Problem: When cipher and legacy decryption fail, encrypted data is misidentified as keep-alive record

When AES cipher decryption and legacy decoding fail, the decoder misidentifies the encrypted data as a keep-alive record.



Additionally, not logging these decryption failures hinders troubleshooting of missing lightning data.

**Operational Impact:** When the cipher password is not found and it falls back into the "legacy" decoder, it incorrectly identifies the encrypted data as a keep-alive record leading to misleading behavior.

**Required Behavior:** The code should throw an exception and/or log a warning and not return a keep-alive record when both cipher decryption and legacy decoding fail. That way if this happens in the future, either on a testbed or an operational system, it will be diagnosed and rectified more quickly. (DR 19339)

---

### 53. Problem: WA 20.58 Move edex\_static nwps grid files to common\_static

Due to a commit to AWIPS2\_baseline refs/heads/omaha\_16.4.1, nwps files that were introduced need to be moved to common\_static.

**Operational Impact:** The nwps grid files will not be accessible by the Localization Perspective.

**Required Behavior:** The nwps files need to be moved to common\_static. (DR 19337)

---

### 54. Problem: RiverPro adjustment to handle Sacramento tidal stage

Riverpro has a special function for wording forecast trends to handle a tidal gage for Sacramento WFO. This is documented in Riverpro Reference Manual Appendix E Section.4.3 - Tidal Locations.

On October 3, 2016, the California Department of Water Resources is changing the datum which will impact how Riverpro generates products at this tidal location. The tidal threshold for this location is defined using a hardcoded check value in the code. The check value in the Riverpro code must change from 7.0 to 9.4. The change is very simple.

Mark Glaudemans will be assisting us with the testing of this DR.

**Operational Impact:** NWS product wording will be unreliable for this location.

**Required Behavior:** Proper interpretation of the tidal threshold and proper product wording. (DR #19333)

---

### 55. Problem: GOES-R - DMW ingest fails

GOES-R Derived Motion Winds fails to decode.

Satellite ingest log errors:

```
INFO 2016-08-24 19:35:33,473 5585 [Ingest.dmw-1] DMWDecoder: EDEX - No descriptions
provided are valid for the file OR_ABI-L2-DMWC-
M3C02_G16_s20150522145327_e20150522148118_c20150522154116.nc
```

INFO 2016-08-24 19:35:33,473 5586 [Ingest.dmw-1] DMWDecoder: EDEX - OR\_ABI-L2-DMWC-M3C02\_G16\_s20150522145327\_e20150522148118\_c20150522154116.nc - Decoded no obs

INFO 2016-08-24 19:35:33,474 5587 [Ingest.dmw-1] Ingest: EDEX: Ingest - dmw:: /data\_store/manual/dmw/20160824/19/OR\_ABI-L2-DMWC-M3C02\_G16\_s20150522145327\_e20150522148118\_c20150522154116.nc processed in: 0.0250 (sec) Latency: 0.0420 (sec)

INFO 2016-08-24 19:35:33,515 5588 [Ingest.dmw-1] DMWDecoder: EDEX - An uncaught error occurred while processing description GOES-R: null

The problem was discovered while testing 16.4.1 DCS 19051 - Enhanced DMW Plugin

**Operational Impact:** GOES-R Derived Motion Winds will not be available.

**Required Behavior:** GOES DMW should decode and display without error. (DR 19332)

---

### 56. Problem: Services on central registry cause server to be constantly in swap

There is no configuration for postgres/qpuid/pypies specific to the central registry. Baseline configurations are being used for the services while running them all on a box with only 6G of ram. The box is constantly in swap with the OS Out Of Memory killer running every couple days killing one of the primary processes. Create baseline central registry configurations for postgres/qpuid/pypies that reduces overall memory consumption.

**Operational Impact:** Baseline configurations are being used for the services while running them all on a box with only 6G of ram. The box is constantly in swap with the OS Out Of Memory killer running every couple days killing one of the primary processes.

**Required Behavior:** Need to have central registry configurations for postgres/qpuid/pypies that reduces overall memory consumption (DR 19331)

---

### 57. Problem: PDA: Cannot create an adhoc query for a specific date

When selecting a specific date for an adhoc request for PDA data, the dialog is unable to parse the date and throws an exception.

**Operational Impact:** When selecting a specific date for an adhoc request for PDA data, the dialog is unable to parse the date and throws an exception and cannot retrieve the data.

**Required Behavior:** The adhoc query should work with a specific date. (DR 19330)



---

**58. Problem: PDA retrieval process incorrectly reports successful retrieval when products are failing**

Has been reported numerous time that the notification manager reports a successful retrieval, when no data was actually retrieved.

There are numerous points in the PDA retrieval process where an error is logged and the process moves on to next step instead of stopping the retrieval process.

**Operational Impact:** The notification manager reports a successful retrieval, when no data was actually retrieved. this can cause a false sense of success.

**Required Behavior:** Data should be successfully retrieved if it is reported that way. **(DR 19329)**

---

**59. Problem: PDA Metadata parser broken**

PDA upgraded their software and DD can no longer parse the transaction message. Update logging to log contents of message in

the event of a failure as well as update parsing to properly handle new message structure.

**Operational Impact:** PDA upgraded their software and DD can no longer parse the transaction message.

**Required Behavior:** Data Delivery needs to handle parsing the transition message and provide better logging if the parsing has issues. **(DR 19328)**

---

**60. Problem: DD PDA: When zoomed into the mapscale, only the colorbar and the product legend will display when loading of a PDA product**

While testing on tbwo, when loading a PDA product on a map scale where the user is zoomed into the display only part of the product or when the map scale clips part of the product area, only the colorbar and the product legend are displayed. You also started receiving the attached AV error message. The product will display and the AV error will stop once you move the product to a side pane, change the mapscale to one that encompasses the full product or zoom out until the full product displays. See attached images.

Although I have provided two PDA product examples (CTH and CTT), I have confirmed that this occurs with different products.

**Operational Impact:** When zoomed into the display only part of the product or when the map scale clips part of the product area, only the colorbar and the product legend are displayed.

**Required Behavior:** The product should be displayed when zoomed in. **(DR 19327)**

---

**61. Problem: MPE Build Hourly: mismatched precip data values between Build Hourly and EDEX ingest.**

There is a mismatch between the way that the values for precipitation data is handled in the MPE Build Hourly process compared to the EDEX ingest. This was discovered while testing RODO 5571 as part of DCS 19124.

To reproduce; follow the test steps for RODO 5571 in the attached text file. This details extracting and comparing the EDEX and build hourly data from the log files.

The test steps list:

Expected Results:

- Start/Stop dates/times match as appropriate
- Parameter attributes match

The actual results are that several of the entries list a value of -9999.0 in the edex-ingest log, but the matching entry in the build hourly log is 0.000

Example from the 8/23/16 logs on test bed TBDR:

edex-ingest:

```
INFO 2016-08-23 17:25:00,519 6194 [DefaultQuartzScheduler_Worker-3] BuildHourly: BIGS2  
PP PZ val:-9999.0 minutes: 0.0 num_recs: 10 ***
```

build hourly:

```
BIGS2 PP PZ val:0.000 minutes:0.000 num_recs:10 ***
```

**Operational Impact:** Precip data that EDEX ingests with a value of "-9999.0" (missing) is assigned a value of 0.0 by the MPE Build Hourly process.

**Required Behavior:** The EDEX ingest and MPE Build Hourly use identical methods for processing incoming precipitation data. (DR 19321)

---

**62. Problem: Rehosed climate F6: Monthly mean temperature can be rounded incorrectly**

HGX site/southern region raised the following issue:

(See attachment CF6 statistical issue for table described).

The CF6 program rounded the tenths place correctly for the average maximum and minimum Temperatures for the month (compare columns 3 to 4 and columns 6 to 7). However, the program did not round up correctly when computing the monthly average temperature -- compare columns 10 to 12 and columns 11 to 13 for both March and June.

For a check to the CF6 method of finding the monthly average temperature, see columns 8 and 9. Here I computed the monthly average temperature by adding the monthly sums of the daily highs

and lows and then dividing that sum by the number of days in the month and then by dividing that number by 2. Note again the differences in March and June.

We could check to see if there was a problem with the CF6 in AWIPS-1 (or even if there was a problem back in the AFOS days) to see if this has been a long-time error. For the time being, I checked NCDC and found that the LCD is available for June (see the attached file). This LCD gives the correct June monthly average temperature of 82.5 and departure of +0.1.

It would be interesting to see if anyone else has found this problem. For now, I think we should at least double check the statistical data that has been computed by the CF6 program. I am also sending a copy of this e-mail to our ITO and our management team to inform them of the problem and to see what we can do to get the program error corrected.

**Operational Impact:** The person running the CF6 product would have to recognize the error and correct it before sending out. If not corrected, incorrect information is disseminated to public, and site could receive calls from public asking about it.

**Required Behavior:** Rounding should be standard (ie 82.45 rounds up to 82.5, not down to 82.4) (DR 19316)

---

### 63. Problem: Registry internationalstring and localizedstring tables not being purged

BNCF has over 5 million rows for less than 20k registry objects in the central registry. With the PDA data stream these two tables will grow by roughly 1 million rows a week. Since we are no longer attempting to maintain ebxml compatibility, recommend dropping the international / localized string tables and just putting in var char column directly.

**Operational Impact:** The increase in rows that will be generated each week will cause performance and possibly stability issues and the table continue to grow.

**Required Behavior:** Rows need to be purged of the data. (DR 19308)

---

### 64. Problem: Localization files have not been migrated over from edex\_static to common\_static

This DR is related to DCS 19123 which calls for the migration of localization files to common\_static as part of an enhancement upgrade. Files currently reside in both edex\_static and common\_static directories in 16.4.1.

**Operational Impact:** Various grid data products might not be retrieved or stored correctly if the grid .xml files do not reside in the correct directory.

**Required Behavior:** The proper localization files need to be migrated into the common\_static directory. (DR 19307)

---

**65. Problem: Database permissions cause failures on EDEX/CAVE startup after clean install**

The following errors were seen in the EDEX ingest and request logs after a clean install of 16.4.1:

```
16:23:10,548 4376 [EDEXMain] ClusterLocker: EDEX - Error processing lock for cluster task  
[pluginVersion/com.raytheon.uf.common.dataplugin.text]
```

```
org.hibernate.exception.SQLGrammarException: could not extract ResultSet
```

```
...
```

```
Caused by: org.postgresql.util.PSQLException: ERROR: permission denied for relation cluster_task
```

```
...
```

Also at CAVE startup all map outlines failed to display with the following errors:

```
could not extract ResultSetcom.raytheon.uf.viz.core.requests.ServerRequestException: could not extract ResultSet
```

```
...
```

```
Caused by: org.hibernate.exception.SQLGrammarException: could not extract ResultSet
```

```
...
```

```
Caused by: org.postgresql.util.PSQLException: ERROR: permission denied for relation geometry_columns
```

```
...
```

**Operational Impact:** Cave won't display maps and text data won't store after a fresh install.

**Required Behavior:** Maps should display and text data should store after a fresh install. **(DR 19305)**

---

**66. Problem: EBXML hibernate queries are returning the cartesian product of all slots on queries.**

Hibernate, as it is used in the EBXML registry, is inefficient in its queries.

The registry has Slot objects that link to the main registry objects that we store in the registry.

These slots were set up to make it easy to query for different fields in registry objects that are common to object types.

Example Slots: Date, Provider Name, Data Set Name, Hazard Event ID, etc.

The way these slots are linked to the registry object is through inner joins by hibernate when you perform queries.

So, you end up with Registry Objects returned = slot1 X slot2 X slot3.

On the user end you still get just the intersection of all of the slots queried for, but in hibernate you get memory bloat because it gives you ALL slots that are contained within the Set of Slots queried for.

Site thinks a good solution here would be to use sub-selects instead of inner joins on the Slot queries. That way you will only get the intersection of the slots in the query not all slots possible.

**Operational Impact:** With hibernate you get memory bloat because it gives you ALL slots that are contained with in the Set of Slots queried for. This has a memory impact on the machine and could be severe depending on the size of the query.

**Required Behavior:** Only get the intersection of the slots in the query not all slots possible. (DR 19304)

---

### 67. Problem: MPE Daily QC: UELE when loading a date with saved Level 2 data.

In the MPE Daily QC, attempting to load temperature or precipitation data for a date that has existing level 2 data results in an error being thrown and the data not appearing.

Steps to reproduce:

1. load the MPE perspective in CAVE.
2. in the Choose Data Period window, set the Ending Hydrologic Data to the current date, and the Num of Days to 1.
3. click the Precipitation button to load the QC data.
4. when the QC data is displayed, make a change to one or more stations: e.g., 6 or 24-hour value, quality code, etc.

This is in order to enable the Render Grids + MAPs button.

5. click the Render Grids + MAPs button.
6. exit the daily QC by clicking the 'X' control in the upper right-hand corner of the QC Precipitation Options window.
7. in the Send to Database window, click the check box for Precipitation, then click the Yes button.
8. if the Choose Data Period window is not open, select MPEControl-->Choose Hour to open it.
9. in the Choose Data Period window, set the Ending Hydrologic Data to the current date, and the Num of Days to 1.
10. click the Precipitation button.

Expected result: the Daily QC data for precipitation is displayed.

Actual result: AlertViz displays a UELE error (see attached text file), the data is not displayed, and the cursor remains in the "spinner" mode.

**Operational Impact:** Users are unable to load Daily QC precipitation or temperature data for any dates which have had the Level 2 data already saved.

**Required Behavior:** If the level 2 data for precipitation and/or temperature has been saved, the daily QC data for that same date can be reloaded without errors. (DR 19303)

---

**68. Problem: PDA: Registry jvm takes over an hour to start with PDA subscriptions active**

Registry takes excessive time to come up when PDA subscriptions are active. The time is in the bandwidth manager as it tries to schedule the subscriptions.

EDEX ESB is now operational \*

Total startup time: 1h8m

Examples from the performance logs:

```
INFO 2016-07-26 19:46:29,151 [EDEXMain] PerformanceLogger:
InMemoryBandwidthManager scheduleSubscriptionForRetrievalTimes() subscription
[LVMPM2-M3-G16-Full] retrievalTimes [2983] total [794085 ms]
createBandwidthSubscriptions [2 ms] storeBandwidthSubscriptions [3 ms] aggregate [794080
ms]
```

```
INFO 2016-07-26 19:50:13,520 [EDEXMain] PerformanceLogger:
InMemoryBandwidthManager scheduleSubscriptionForRetrievalTimes() subscription [LVMPM2-
M3-G17-Full] retrievalTimes [746] total [222077 ms] createBandwidthSubscriptions [1 ms]
storeBandwidthSubscriptions [1 ms] aggregate [222075 ms]
```

Jstack usually showed main thread loading a row from the datasetLatency table as its constantly being reloaded for the same subscription.

**Operational Impact:** This will impact operations due to the delay of the registry start up.

**Required Behavior:** Registry start up time should be minimal when PDA subscriptions are active. (DR 19302)

---

**69. Problem: Registry is dropping replication events**

Central registry is not sending all changes to all sites. Central registry says all changes had been sent but looking at client registries they have different registry objects than each other as well as compared to central. The client log often shows delete events not being processed correctly due to the object not existing in the client registry.

**Operational Impact:** Central registry is not sending all changes to all sites. This causes missing data at the site registries which can cause several issues.

**Required Behavior:** Central registry should send all changes to all sites. (DR 19301)

---

**70. Problem: GOES-R "Hide incomplete Frames" feature is listed for each GOES-R product loaded**

When there are multiple GOES-R products loaded on a frame there are multiple instances of "Hide incomplete Frames". Each is for a product, but there's no distinction other than the order, so it's not immediately obvious which to use.

This appears to be a design issue, so it's not clear what the intended behavior should be when there are multiple GOES-R products loaded.

Very minor, but if the developer ends up having to make a change, it would be nice to make the capitalization on the message consistent like either "Hide incomplete frames" or "Hide Inconsistent Frames".

**Operational Impact:** If multiple GOES-R products are loaded there's no distinction between the multiple listing of "Hide incomplete Frames" in the right click menu other than the order, so it's not immediately obvious which to use.

**Required Behavior:** This appears to be a design issue, so it's not clear what the intended behavior should be when there are multiple GOES-R products loaded. (DR 19294)

---

### 71. Problem: GFE - runProcedure.py fails after Jep 3.5 upgrade

The runProcedure.py command fails after the Jep 3.5 upgrade with the error below:

```
<type 'exceptions.ImportError'>: No module named Systemjep.JepException: <type 'exceptions.ImportError'>: No module named System
```

```
at /awips2/GFESuite/bin/src/runprocedure/runProcedure.<module>(runProcedure.py:40)
```

```
runProcedure.py bad/current code:
```

```
from java.lang.System import getProperty
```

```
1.stuff in between
```

```
if userName is None:
```

```
    userName = getProperty("user.name")
```

```
runProcedure.py good/new code:
```

```
from java.lang import System
```

```
1.stuff in between
```

```
if userName is None:
```

```
    userName = System.getProperty("user.name")
```

The problem may affect localapps so the issue should be noted in the living release notes for 16.4.1. This issue was found while smoke testing 16.4.1 BOIVerify.

**Operational Impact:** The runProcedure.py fails. This causes anything that uses it, like BOIVerify, to fail. SmartTools run from the command line will fail. Localapps could be affected depending on how they are written.

**Required Behavior:** runProcedure.py should run without error. (DR 19248)



---

**72. Problem: Upgrade script for DCS 19131 doesn't hit all databases**

The upgrade script has a typo and doesn't properly iterate all the databases listed in the upgrade script.

**Operational Impact:** ingestDat crashing after 16.4.1 install

**Required Behavior:** ingestDat should start up successfully without crashing. (DR 19238)

---

**73. Problem: File missed in upgrade of Openfire in 16.4.1**

There appears to be a file missed during the upgrade of Openfire within the org.jivesoftware.openfire plugin. This plugin is only used within an Eclipse dev environment, so the implications are not clear and may depend on where the build is pulling the jar from, i.e. from the tar.gz or the jar. Regardless, this should be fixed.

The file that missed the upgrade is

./org.jivesoftware.openfire/openfire-3.10.2.jar

**Operational Impact:** File is only missing in a development environment. No impact to the field.

**Required Behavior:** Make sure all files under org.jivesoftware.openfire are updated to openfire-3.10.3. (DR 19207)

---

**74. Problem: Error is returned when running the AFM formatter in GFE**

The error below is returned when running the AFM formatter in GFE. This was caused by the Jep upgrade in 16.4.1.

```
Error generating text productjep.JepException: jep.JepException: <type 'exceptions.Exception': area specification incorrect
at jep.Jep.eval(Jep.java:485)
at com.raytheon.uf.common.python.PythonScript.internalExecute(PythonScript.java:230)
at com.raytheon.viz.gfe.textformatter.FormatterScript.execute(FormatterScript.java:69)
at com.raytheon.viz.gfe.textformatter.FormatterScript.execute(FormatterScript.java:76)
at com.raytheon.viz.gfe.textformatter.TextFormatter.doRun(TextFormatter.java:190)
at com.raytheon.viz.gfe.tasks.AbstractGfeTask.run(AbstractGfeTask.java:210)
Caused by: jep.JepException: <type 'exceptions.Exception': area specification incorrect
at /awips2/cave/etc/gfe/userPython/textUtilities/regular/Interfaces.getSampler(Interfaces.py:72)
at /home/snichols/caveData/etc/configured/OAX/gfe/userPython/textProducts/PFM.generateForecast(PFM.py:329)
at /awips2/cave/etc/gfe/userPython/textUtilities/headline/TextFormatter.getForecast(TextFormatter.py:182)
at /awips2/cave/etc/gfe/userPython/textUtilities/headline/FormatterRunner.runFormatter(FormatterRunner.py:254)
```



```

at /awips2/cave/etc/gfe/userPython/textUtilities/headline/FormatterRunner.executeFromJava(FormatterRunner.py:115)
Error generating text productjep.JepException: jep.JepException: <type 'exceptions.Exception': area specification incorrect
at jep.Jep.eval(Jep.java:485)
at com.raytheon.uf.common.python.PythonScript.internalExecute(PythonScript.java:230)
at com.raytheon.viz.gfe.textformatter.FormatterScript.execute(FormatterScript.java:69)
at com.raytheon.viz.gfe.textformatter.FormatterScript.execute(FormatterScript.java:76)
at com.raytheon.viz.gfe.textformatter.TextFormatter.doRun(TextFormatter.java:190)
at com.raytheon.viz.gfe.tasks.AbstractGfeTask.run(AbstractGfeTask.java:210)
Caused by: jep.JepException: <type 'exceptions.Exception': area specification incorrect
at /awips2/cave/etc/gfe/userPython/textUtilities/regular/Interfaces.getSampler(Interfaces.py:72)
at /home/snichols/caveData/etc/configured/OAX/gfe/userPython/textProducts/PFM.generateForecast(PFM.py:329)
at /awips2/cave/etc/gfe/userPython/textUtilities/headline/TextFormatter.getForecast(TextFormatter.py:182)
at /awips2/cave/etc/gfe/userPython/textUtilities/headline/FormatterRunner.runFormatter(FormatterRunner.py:254)
at /awips2/cave/etc/gfe/userPython/textUtilities/headline/FormatterRunner.executeFromJava(FormatterRunner.py:115)

```

**Operational Impact:** The AFM formatter fails to complete.

**Required Behavior:** The AFM formatter should run successfully without error. (DR 19205)

## 75. Problem: June 2016 Security Patches

Security Patch update from the June 2016 scans to be included in 16.4.1

**Operational Impact:** N/A

**Required Behavior:** N/A (DR 19197)

## 76. Problem: NUCAPS: missing IDX field in archive .bin files

When *processed* data are created by each plugin in /archive as part of the 7-day rollover, there are always a set of .bin files plus HDF files depending on the datatype. These bin files contain records from the metadata database on an hourly basis for each datatype and are subsequently read by WES-2 Bridge in order to have a complete dataset and display the archived data.

The **.bin** files for NUCAPS soundings are missing a key field, the IDX field. Without this field the data cannot be displayed because this field links the datauri and time for each sounding to the actual temperature, pressure and moisture data in the sounding's HDF files.

We have looked in the code and know what the fix is. In

com.raytheon.uf.common.dataplugin.npp.sounding/src/com/raytheon/uf/common/dataplugin/npp/sounding/NPPSoundingRecord.java, a DynamicSerializeElement annotation needs to be added:

```
@Embedded
```

```
@DynamicSerializeElement  
private PointDataView pointDataView;
```

**Operational Impact:** Users can't easily view archived nucaps data without reprocessing it on WES-2 Bridge

**Required Behavior:** The bin files need to contain the IDX field so the data can be correctly loaded into WES-2 Bridge. (DR 19181)

---

### 77. Problem: NCF Bandwidth Manager persistence issue at start up

ERROR 2016-05-25 20:05:32,721 [pool-7-thread-4] default: Could not dispatch event:

```
com.raytheon.uf.edex.datadelivery.bandwidth.ncf.NcfBandwidthManagerCreator$NcfBandwidth  
Manager@8a8fbe2 to public void  
com.raytheon.uf.edex.datadelivery.bandwidth.EdexBandwidthManager.persistScheduledSubscri  
ption(com.raytheon.uf.common.datadelivery.registry.Subscription)
```

Appears that the row count is not what the HibernateTransaction manager is expecting.

See attached error file.

**Operational Impact:** No impact besides exceptions found in log.

**Required Behavior:** The error should not occur. (DR 19171)

---

### 78. Problem: The Version menu becomes dithered/inactive in the Text Display window when the cursor is in the AWIPS ID, or WMO TTAAii CCCC textboxes

After entering an AWIPS ID and pressing the Enter key, a text product displayed. However, the Version menu item was dithered. The Version menu item became active once the cursor was placed into the AFOS Cmd textbox. The Version menu item also becomes dithered when the cursor is placed into either textbox associated with the WMO TTAAii CCCC section.

**Operational Impact:** The Version menu is disabled and does not allow users to load different versions of text products.

**Required Behavior:** The AWIPS, WMO and AFOS text fields should not control the status of the Version menu. (DR 19170)

---

### 79. Problem: Geometry in ActiveTableRecord causing OutOfMemory errors on ingest JVM

Since the geometry field is now populated in the WarningRecord after RODO DR #5657 (under DCS #18779) it is copied into the ActiveTableRecord but appears to be unused in that record. Having the geometry field populated unnecessarily consumes large amounts of memory causing

occasional OutOfMemory errors in the ingest JVM and requiring frequent vacuuming of the ActiveTable database table.

The geometry field should be removed from the ActiveTableRecord as it is not needed in that record.

**Operational Impact:** Ingest JVM runs out of memory.

**Required Behavior:** The geometry field should be removed from the ActiveTableRecord as it is not needed in that record allowing ingest JVM to remain stable. (DR 19169)

---

## 80. Problem: Cryptacular java lib missing, 16.4.1 registry won't start

Starting the 16.4.1 registry fails because of a missing "Cryptacular" library.

From the message it appears to be a dependency of openSAML.

This may be related to the recent openSAML upgrade, DR #18842.

INFO 2016-06-16 13:08:57,755 2236 [EDEXMain] InitializationService: Initializing OpenSAML using the Java Services API

ERROR 2016-06-16 13:08:58,270 2237 [EDEXMain] Main: Error occurred during startup: java.lang.reflect.InvocationTargetException: null

```

at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62) ~[na:1.8.0_77]
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43) ~[na:1.8.0_77]
at java.lang.reflect.Method.invoke(Method.java:498) ~[na:1.8.0_77]
at com.raytheon.uf.edex.esb.Main.main(Main.java:161) ~[com.raytheon.uf.edex.esb.camel.launcher.jar:na]
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method) ~[na:1.8.0_77]
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62) ~[na:1.8.0_77]
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43) ~[na:1.8.0_77]
at java.lang.reflect.Method.invoke(Method.java:498) ~[na:1.8.0_77]
at org.rzo.yajsw.app.WrapperJVMMain.executeMain(WrapperJVMMain.java:53) [wrapperApp.jar:na]
at org.rzo.yajsw.app.WrapperJVMMain.main(WrapperJVMMain.java:36) [wrapperApp.jar:na]
Caused by: java.lang.NoClassDefFoundError: org/cryptacular/x509/dn/AttributeType
at org.opensaml.security.config.ClientTLSValidationConfiguratorInitializer.init(ClientTLSValidationConfiguratorInitializer.java:41)
[opensaml-security-impl-3.1.1.jar:na]
at org.opensaml.core.config.InitializationService.initialize(InitializationService.java:56)
at com.raytheon.uf.edex.registry.acp.xacml.util.XACMLParser.<init>(XACMLParser.java:95)
[com.raytheon.uf.edex.registry.ebxml.jar:na]
at com.raytheon.uf.edex.registry.acp.xacml.util.XACMLParser.getInstance(XACMLParser.java:87)

at com.raytheon.uf.edex.registry.acp.xacml.XACMLPolicyAdministrator.loadAccessControlPolicies(XACMLPolicyAdministrator.java:214)
[com.raytheon.uf.edex.registry.ebxml.jar:na]
at com.raytheon.uf.edex.registry.acp.xacml.XACMLPolicyAdministrator$$FastClassBySpringCGLIB$$254b528e.invoke(<generated>)

at org.springframework.cglib.proxy.MethodProxy.invoke(MethodProxy.java:204) ~[spring-core-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.aop.framework.CglibAopProxy$CglibMethodInvocation.invokeJoinpoint(CglibAopProxy.java:720)
[spring-aop-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:157)

at org.springframework.transaction.interceptor.TransactionInterceptor$1.proceedWithInvocation(TransactionInterceptor.java:99)
[spring-tx-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.transaction.interceptor.TransactionAspectSupport.invokeWithinTransaction(TransactionAspectSupport.java:281)

at org.springframework.transaction.interceptor.TransactionInterceptor.invoke(TransactionInterceptor.java:96)
[spring-tx-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:179)

at org.springframework.aop.framework.CglibAopProxy$DynamicAdvisedInterceptor.intercept(CglibAopProxy.java:655)

```

```
[spring-aop-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at
com.raytheon.uf.edex.registry.acp.xacml.XACMLPolicyAdministrator$$EnhancerBySpringCGLIB$$3822bfd4.loadAccessControlPolicies(<generated>)
at com.raytheon.uf.edex.registry.ebxml.dao.DbInit.executeAdditionalSql(DbInit.java:145)
[com.raytheon.uf.edex.registry.ebxml.jar:na]
at com.raytheon.uf.edex.database.init.DbInit.initDb(DbInit.java:156)
at com.raytheon.uf.edex.database.init.DbInit$$FastClassBySpringCGLIB$$ac053153.invoke(<generated>)
[com.raytheon.uf.edex.database.jar:na]
at org.springframework.cglib.proxy.MethodProxy.invoke(MethodProxy.java:204)
at org.springframework.aop.framework.CglibAopProxy$CglibMethodInvocation.invokeJoinpoint(CglibAopProxy.java:720)
[spring-aop-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:157)

at org.springframework.transaction.interceptor.TransactionInterceptor$1.proceedWithInvocation(TransactionInterceptor.java:99)
[spring-tx-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.transaction.interceptor.TransactionAspectSupport.invokeWithinTransaction(TransactionAspectSupport.java:281)

at org.springframework.transaction.interceptor.TransactionInterceptor.invoke(TransactionInterceptor.java:96)
[spring-tx-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:179)

at org.springframework.aop.framework.CglibAopProxy$DynamicAdvisedInterceptor.intercept(CglibAopProxy.java:655)
[spring-aop-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at com.raytheon.uf.edex.registry.ebxml.dao.DbInit$$EnhancerBySpringCGLIB$$e4567a1b.initDb(<generated>)

at com.raytheon.uf.edex.registry.ebxml.dao.DbInit.onApplicationEvent(DbInit.java:353)
[com.raytheon.uf.edex.registry.ebxml.jar:na]
at com.raytheon.uf.edex.registry.ebxml.dao.DbInit.onApplicationEvent(DbInit.java:1)
at com.raytheon.uf.edex.registry.ebxml.dao.DbInit$$FastClassBySpringCGLIB$$2e1392b5.invoke(<generated>)
[com.raytheon.uf.edex.registry.ebxml.jar:na]
at org.springframework.cglib.proxy.MethodProxy.invoke(MethodProxy.java:204)
at org.springframework.aop.framework.CglibAopProxy$CglibMethodInvocation.invokeJoinpoint(CglibAopProxy.java:720)
[spring-aop-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:157)

at org.springframework.transaction.interceptor.TransactionInterceptor$1.proceedWithInvocation(TransactionInterceptor.java:99)
[spring-tx-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.transaction.interceptor.TransactionAspectSupport.invokeWithinTransaction(TransactionAspectSupport.java:281)

at org.springframework.transaction.interceptor.TransactionInterceptor.invoke(TransactionInterceptor.java:96)
[spring-tx-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:179)

at org.springframework.aop.framework.CglibAopProxy$DynamicAdvisedInterceptor.intercept(CglibAopProxy.java:655)
[spring-aop-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at com.raytheon.uf.edex.registry.ebxml.dao.DbInit$$EnhancerBySpringCGLIB$$e4567a1b.onApplicationEvent(<generated>)

at org.springframework.context.event.SimpleApplicationEventMulticaster.invokeListener(SimpleApplicationEventMulticaster.java:163)
[spring-context-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.context.event.SimpleApplicationEventMulticaster.multicastEvent(SimpleApplicationEventMulticaster.java:136)

at org.springframework.context.support.AbstractApplicationContext.publishEvent(AbstractApplicationContext.java:381)
[spring-context-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.context.support.AbstractApplicationContext.publishEvent(AbstractApplicationContext.java:335)

at org.springframework.context.support.AbstractApplicationContext.finishRefresh(AbstractApplicationContext.java:855)
[spring-context-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.context.support.AbstractApplicationContext.refresh(AbstractApplicationContext.java:541)

at org.springframework.context.support.ClassPathXmlApplicationContext.<init>(ClassPathXmlApplicationContext.java:139)
[spring-context-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at org.springframework.context.support.ClassPathXmlApplicationContext.<init>(ClassPathXmlApplicationContext.java:93)
~[spring-context-4.2.4.RELEASE.jar:4.2.4.RELEASE]
at com.raytheon.uf.edex.esb.camel.Executor.start(Executor.java:181) ~[com.raytheon.uf.edex.esb.camel.jar:na]
```

... 11 common frames omitted

Caused by: java.lang.ClassNotFoundException: org.cryptacular.x509.dn.AttributeType  
at java.net.URLClassLoader.findClass(URLClassLoader.java:381) ~[na:1.8.0\_77]

```
at java.lang.ClassLoader.loadClass(ClassLoader.java:424) ~[na:1.8.0_77]
at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:331) ~[na:1.8.0_77]
at java.lang.ClassLoader.loadClass(ClassLoader.java:357) ~[na:1.8.0_77]
... 59 common frames omitted
```

**Operational Impact:** Registry fails to start.

**Required Behavior:** Registry should start without error noted in the description. (DR 19168)

---

### 81. Problem: HPE Not Inserting Correct Data Source Value into HpeRadarResult DB Table

The radar data that the High Resolution Precipitation Estimator (HPE) s/w processes as input comes in two types: Single Pole and Dual Pole. The metadata information about products that HPE generates is stored in the HpeRadarResult table in the Hydro DB. The column in that table named radar\_data\_source indicates if the product was generated using Single Pole (S) or Dual Pole (D) data. This flag is not correctly set and always indicates that the data source is Single Pole even when the log file indicates that Dual Pole data was used. Also discovered that this flag seems to be correctly set at several sites where AWIPS 16.1.3 is installed (ABR and DLH). So, the problem seems to have started sometime after release 16.1.3. This DR resulted from investigation of TT 738701.

**Operational Impact:** HPE is still using the Dual Pole radar data when it is available. It is just misleading the AWIPS user by indicating via the header display that Single Pole radar data is always used.

**Required Behavior:** When HPE product is produced using Dual Pole radar data, the radar\_data\_source column in the hperadarresult DB table for that product should indicate this by having a "D" inserted into that column (DR 19159)

---

### 82. Problem: BMH scheduling, issue with changing suite

Joel Nathan reported that if I generate a high trigger interrupt and then replace it with a high non-trigger interrupt, the replacement is made and the playlist stays in the high suite with the non-trigger playing. If I try to change the suite back to general, it still stays in high. It even continues in high after the non-trigger expires and it keeps playing. The only way I can get back to general is to disable/enable the transmitter and send in a new general message.

**Operational Impact:** Cannot change Suite back to General from High Non-trigger

**Required Behavior:** Should be able to change Suite back to General from High Non-trigger (DR 19146)

---

### 83. Problem: GFE: PlotSPCWatches failed to run - database deadlock

While running PlotSPCWatches and ViewWCL in GFE, errors were returned and it took 5 minutes or more for the procedures to attempt to complete and return the errors. However, when running the procedures a second time, they completed successfully without errors or delay.

It was found that the ActiveTable.merge can deadlock with queries as hibernate can issue an update statement for a row returned in a query on session flush. This was introduced by #18071.

**Operational Impact:** Procedures can fail to run in GFE if timing is just right where the active table is updating at the exact time the procedure is run causing a database deadlock.

**Required Behavior:** Running of GFE procedures should not be affected by active table updates. (DR 19137)

---

#### **84. Problem: DD: Data Provider Agent does not work after 16.4.1 CXF upgrade**

It was found during testing that the Data Provider Agent fails to run after the 16.4.1 CXF upgrade.

**Operational Impact:** The Data Provider Agent fails to run

**Required Behavior:** The Data Provider Agent should run without issue. (DR 19133)

---

#### **85. Problem: Generate single retransmission request for each missing product with LDM**

When a large product like GOES imagery of size 26MB is broadcast over SBN, sites with reception issue, could drop several frames associated with single product. When multiple frames are dropped, multiple requests are generated for the same product. This will increase the retransmission request size although it does not impact uplink software at NCF.

The issue will be addressed by checking the product sequence number and when several frames from the same product are lost, then a single retransmission request is generated and transmitted to NCF using MHS.

**Operational Impact:** None

**Required Behavior:** Single retransmission request should be generated for a missed product containing multiple frames or blocks. (DR 19120)

---

#### **86. Problem: Shared displays are broken due to collab-dataserver errors**

The server component collab-dataserver that supports shared display sessions is no longer working correctly. You can still chat but the sharing of map tabs is completely broken. Multiple errors appear and the participants don't see anything from the leader.

**Operational Impact:** Shared collaboration displays will not work

**Required Behavior:** Collaboration display should be able to be shared (DR 19113)



## 87. Problem: Eclipse 4 Upgrade: Error when clicking Matrix Tab in Ensemble Tool

In checkout testing, we discovered the following error when a user clicks the Matrix tab in the ensemble tool:

```

Unhandled event loop exception java.lang.NullPointerException
at gov.noaa.gsd.viz.ensemble.navigator.ui.viewer.matrix.MatrixNavigatorComposite.giveEditorFocus(MatrixNavigatorComposite.java:467)
at gov.noaa.gsd.viz.ensemble.navigator.ui.viewer.matrix.MatrixNavigatorComposite.setFocus(MatrixNavigatorComposite.java:1201)
at org.eclipse.swt.custom.CTabItem.setFocus(CTabItem.java:332)
at org.eclipse.swt.custom.CTabFolder.setFocus(CTabFolder.java:2602)
at org.eclipse.swt.widgets.Control.setFocus(Control.java:214)
at org.eclipse.swt.widgets.Control.setVisible(Control.java:4921)
at org.eclipse.swt.custom.CTabFolder.setSelection(CTabFolder.java:3146)
at org.eclipse.swt.custom.CTabFolder.setSelection(CTabFolder.java:3154)
at org.eclipse.swt.custom.CTabFolder.onMouse(CTabFolder.java:1841)
at org.eclipse.swt.custom.CTabFolder$1.handleEvent(CTabFolder.java:330)
at org.eclipse.swt.widgets.EventTable.sendEvent(EventTable.java:84)
at org.eclipse.swt.widgets.Display.sendEvent(Display.java:4481)
at org.eclipse.swt.widgets.Widget.sendEvent(Widget.java:1329)
at org.eclipse.swt.widgets.Display.runDeferredEvents(Display.java:3819)
at org.eclipse.swt.widgets.Display.readAndDispatch(Display.java:3430)
at org.eclipse.e4.ui.internal.workbench.swt.PartRenderingEngine$4.run(PartRenderingEngine.java:1127)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:337)
at org.eclipse.e4.ui.internal.workbench.swt.PartRenderingEngine.run(PartRenderingEngine.java:1018)
at org.eclipse.e4.ui.internal.workbench.E4Workbench.createAndRunUI(E4Workbench.java:156)
at org.eclipse.ui.internal.Workbench$5.run(Workbench.java:654)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:337)
at org.eclipse.ui.internal.Workbench.createAndRunWorkbench(Workbench.java:598)
at org.eclipse.ui.PlatformUI.createAndRunWorkbench(PlatformUI.java:150)
at com.raytheon.uf.viz.personalities.cave.component.CAVEApplication.startComponent(CAVEApplication.java:186)
at com.raytheon.uf.viz.application.VizApplication.start(VizApplication.java:97)
at org.eclipse.equinox.internal.app.EclipseAppHandle.run(EclipseAppHandle.java:196)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.runApplication(EclipseAppLauncher.java:134)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.start(EclipseAppLauncher.java:104)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:380)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:235)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.eclipse.equinox.launcher.Main.invokeFramework(Main.java:669)
at org.eclipse.equinox.launcher.Main.basicRun(Main.java:608)
at org.eclipse.equinox.launcher.Main.run(Main.java:1515)
at org.eclipse.equinox.launcher.Main.main(Main.java:1488)

```

**Operational Impact:** User is unable to use the Matrix tab functionality in Ensemble Tool - preventing them from using this to do their job.

**Required Behavior:** Functionality should work. (DR 19103)

## 88. Problem: Dac Transmit does not retry audio reads on failure

Dac Transmit randomly failed to read an audio file once.

```

com.raytheon.uf.common.bmh.audio.AudioRetrievalException: Failed to buffer audio file for message: 61040, file:
/_awips2/bmh/data/audio/160330/SATRWTBRO_ENG_Paul_61040_61090_161746.ulaw
at com.raytheon.bmh.dactransmit.playlist.RetrieveAudioJob.call(RetrieveAudioJob.java:194)
~[com.raytheon.bmh.dactransmit.jar:na]
at com.raytheon.bmh.dactransmit.playlist.AbstractAudioJob.call(AbstractAudioJob.java:1) [com.raytheon.bmh.dactransmit.jar:na]
at java.util.concurrent.FutureTask.run(FutureTask.java:262) [na:1.7.0_80]
at com.raytheon.bmh.dactransmit.playlist.PriorityBasedExecutorService$PrioritizableFuture.run(PriorityBasedExecutorService.java:116)
[com.raytheon.bmh.dactransmit.jar:na]

```



```
at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1145) [na:1.7.0_80]
at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:615) [na:1.7.0_80]
at java.lang.Thread.run(Thread.java:745) [na:1.7.0_80]
Caused by: java.nio.channels.ClosedByInterruptException: null
at java.nio.channels.spi.AbstractInterruptibleChannel.end(AbstractInterruptibleChannel.java:202) ~[na:1.7.0_80]
at sun.nio.ch.FileChannelImpl.size(FileChannelImpl.java:312) ~[na:1.7.0_80]
at java.nio.file.Files.readAllBytes(Files.java:2983) ~[na:1.7.0_80]
at com.raytheon.bmh.dactransmit.playlist.RetrieveAudioJob.call(RetrieveAudioJob.java:181)
~[com.raytheon.bmh.dactransmit.jar:na]
... 6 common frames omitted
```

This is the first time this error has been seen across the entire time span of BMH. Dac Transmit should be updated to attempt to re-read an audio file that it failed to read the first time.

**Operational Impact:** If an audio file fails to be read the first time, the file/message will never be re-read and broadcast.

**Required Behavior:** Dac Transmit should be updated to attempt to re-read an audio file that it fails to read the first time. (DR 19085)

---

### 89. Problem: GOES-R true color is broken

GOES-R true color no longer correctly displays the colors. This was traced to VLab ticket 4487 introduced in 14.3.1. <https://vlab.ncep.noaa.gov/redmine/issues/4487>

The associated O&M DR is #14959

Attached is an image displaying the problems.

1. If you look at the attached image showing the three GOES-R true color products, the left shows the 16.2.2 true color behavior and the right shows the correct true color behavior from before VLab 4487. In the current version, two of the products don't even render anything and the third is not correct.
2. VIIRS true color now loads the data with the wrong units. The actual image appears the same but the dialog is much harder to use. Even more odd is that if you save it in a procedure and load it again then it loads with the correct units. While it is a nice workaround, it really breaks the idea that serialization should generate the same product you are using, it causes subtle bugs like the fact the product can be loaded twice since they are now identified as different products.

**Operational Impact:** Colors are not correctly displayed sometimes showing blank displays.

**Required Behavior:** See attached images for required behavior. Colors should correctly display. (DR 19083)

---

### 90. Problem: Station NCKN6 from ALY showing values of 'zero' in site

When viewing data for site NCKN6 in site specific, the FFH guidance is displaying all zeros.

**Operational Impact:** The users can not have the latest model state for the Site Specific program

**Required Behavior:** When viewing data for site NCKN6 in site specific, the FFH guidance is displayed correctly. (DR 19081)

---

## 91. Problem: AvnFPS: problem reporting erroneously high LIFR readings

AFC reported a problem with AvnFPS that the counts for LIFR (Low IFR conditions) are too high at midnight local time. This occurs for all Obs in AvnFPS. He mentioned that it is a national problem and that other offices are reporting the same thing. He has spoken with BUF, MSO, GGW, and CAE about this and it happens to them as well at their respective local midnights. He took nine screenshots illustrating the problem which are attached to this DR.

This appears to be a known problem. There is a solution for this for A1 provided:

1) Log into an AWIPS workstation and open a command-line interface, then change your working directory to  
/awips/adapt/avnfps/OB9.2  
cd /awips/adapt/avnfps/OB9.2

2) Preserve the AWIPS baseline code by making a copy of the original code to be changed. The copy shall be placed in the sitepy directory  
cp py/ClimateDataUpdate.py sitepy/

3) Using your favorite editor, open the sitepy/ClimateDataUpdate.py file and go to line 54  
reject\_codes=['FM-12','NSRDB']

4) We are going to add new observations types to this list (shown in green here), varying the number of trailing whitespaces. reject\_codes=['FM-12','NSRDB\*', 'SOD', 'SOD ', 'SOD ', 'SOM', 'SOM ', 'SOM '\*]

'SOD' and 'SOM' with zero, one and two trailing white spaces to catch them all.

5) That it! Save your changes and exit the editor.

You should be able to update your HDF5 climate files without these reports being added to them in future updates.

If updated HDF5 files were saved with those synthetic observations, and it now has these bogus VLIFR ceiling spikes in them, to get them out of the HDF5 climate files there is a utility for exactly this kind of situation called "fixClimateFiles.py" in the /awips/adapt/avnfps/OB9.2/py directory with an identical 'reject\_codes' list on line 66. This utility will go through the entire HDF5 climate file, checking every record and remove observation types that match those in the reject\_codes list. The utility can be updated in a similar way, following the instructions steps 1 through 4 that I've just described for ClimateDataUpdate.py.

If it's not fixed and you run it on your climate files, you will be able to display the cleaned up data in the climate tools just fine (Yay!), but the ability to append more records to them during the next update is lost. Completely. That's bad.

Fortunately, this utility's bug can be easily fixed. Here are the steps.

0) If you still have fixClimateFiles.py in the opened in the text editor, proceed to next step below. Otherwise, using your favorite editor, open the sitepy/fixClimateFiles.py.

1) Go to line 104. It looks like this: newrow.append()

2) Remove four (4) leading white spaces from this line, i.e., in column 1, press the <Delete> key four times. This will move this statement to the outside of an inner for loop. Here is the surrounding code, before and after the change.

Original code

```
97:     for row in oldinfo.iterrows(step=1):
98:         newrow = newinfo.row
99:         for col in newinfo.colnames:
100:            try:
101:                newrow[col] = row[col]
102:            except Exception, e:
103:                _tee(log,'%s\n' % str(e))
104:                newrow.append()
105:
106:     counter = 0
107:     old_time = 0L
```

After deleting four leading white spaces from line 104:

```
97:     for row in oldinfo.iterrows(step=1):
98:         newrow = newinfo.row
99:         for col in newinfo.colnames:
100:            try:
101:                newrow[col] = row[col]
102:            except Exception, e:
103:                _tee(log,'%s\n' % str(e))
104:     newrow.append()
105:
106:     counter = 0
107:     old_time = 0L
```

The 'n' in newrow on line 104, should line up column-wise with the 'f' in the for loop on line 99 as shown above.

3) That's it! Save your changes to this utility and exit the editor.

Now with the fully repaired utility, you can remove any bogus observations from your HDF5 climate files. And with the modified ClimateUpdateTool application, you will prevent these observations from being added to climate files when you update them the next time.

How do you run the fixClimateFiles.py utility? Since the repaired version is in the sitepy directory, invoking it is a bit awkward now. You can't use the avnstart.sh script to run it anymore.

At the command line, switch to bash shell

```
% sh
$
```

Set the proper environment variables for running AvnFPS applications

```
$ ./awips/adapt/avnfps/bin/avnenv.sh
$
```

Now invoke the modified utility to fix KPHX and KSDL climate files. (You can add more sites, as many as you want by appending them to the end)

```
$ $PYTHON $TOP_DIR/sitepy/fixClimateData.py KPHX KSDL
```

The utility will show progress 'dots' so that you know its running. It will take approximately 5 to 6 minutes for each site. Because you now cleaned out existing bogus records, and the update tool has been fixed, this utility does not need to be run again.

**Operational Impact:** Incorrect historical data can cause confusion to forecasters.

**Required Behavior:** Only correct data should be presented to forecasters. (DR 19079)

---

## 92. Problem: GFE: Product Editor word wrapping issue

From OPCN site, the problem is that our SITE-level text formatter overrides have a setting for "lineLength" to be 65 characters, but the line length limit is not respected when a forecaster makes manual edits to the text output generated by formatter. The forecaster can sometimes add characters or words which results in the line length exceeding 65 characters. This is a problem for one of our customers (US Coast Guard) because their processing systems cannot handle line lengths greater than 69 characters. The problem happens for multiple text products on our system. NHCN sets the limit at 65 to stay well under the maximum allowed by the coast guard. But when the line length is not adhered to at 65, it can end up going over 69 as well.

I have gathered a series of screen shots to explain and reproduce the problem:

1. On an OPCN LX workstation, launch GFE as site ONA and start up the text product formatter launcher.
2. Choose a product, such as VOBRA > VOBRA\_OFF\_N32. This is an offshore waters marine text product. (attachment wordwrap1.png)
3. Click the "gear" icon to run the formatter. You can choose any time for Product Issuance. (attachment wordwrap2.png) 4. The resultant text conforms to word-wrap line limits of 65 characters. (attachment wordwrap3.png)
5. Place your cursor at the end the line marked by the red outline in step 4 and press the backspace key to delete the period, and you will see "Scattered" come up to the current line which exceeds the 65-character limit by 1 character. This is already a violation of the lineLength variable setting of 65 characters. Additionally you can type the characters "WITH 2 " on that line, bringing the total line length to 73 characters. (attachment wordwrap4.png)
6. At the bottom of the editor window there is a "checkbox" next to the Transmit button which makes the product formatting look like exactly the way it will appear once it's transmitted. When I click that checkbox the text changes to UPPER case but the line-length does not change. The 73-character-long line still exists.

7. To verify our override settings, please see our OFF\_ONA\_N32.py definition file (CONFIGURED) which shows the overrides we have activated for this product. They are the siteOverrides file OFF\_ONA\_Overrides and the regionOverrides file OFF\_NC\_Overrides. (attachment wordwrap6.png)

8. Our site OFF\_ONA\_Overrides file does not have a lineLength variable defined, but our regions OFF\_NC\_Overrides file does. It is set to 65 characters. (attachment wordwrap7.png).

**Operational Impact:** Products are formatted with incorrect line lengths, causing issue for customer.

**Required Behavior:** Word wrap should honor the line length setting. (DR 19077)

---

### 93.Problem: EDEX environment instances not being checked correctly, so only one can be run at a time

After the edex-environment command is run with the -create option, the resulting edex\_camel script has an error in line 63 where it determines the PID for the edex JVM that has been spawned.

Wrong version:

```
_camel_pid=`pgrep -f -u $EDEXUSER "java -Dedex.run.mode=${1} "`
```

It needs to contain at least the -Dwes2bridge.instance= argument like this:

```
_camel_pid=`pgrep -f "java.*-Dedex.run.mode=${1} -Daw.site.identifier=+ -Dwes2bridge.instance=EDEX_00 "`
```

(Our instances are named EDEX\_00, EDEX\_01, etc, through EDEX\_04).

Without this additional argument in the search string, it's not possible to have more than one instance running at the same time because the second invocation finds the PID for a previously-running instance.

We routinely have 2-5 instances running simultaneously.

I think there is a java routine that creates the macro file and that is where the code modification needs to be made.

The test procedure I mentioned is that the test is passed if two instances are running at the same time. The existing test may be just that an instance can be started.

I don't know any particulars about any previous DR or DCS. I've also tracked the same behavior back to 16.2.1-14.

**Operational Impact:** None, the edex-environment is used for stand alone systems.

**Required Behavior:** More than one instance of edex in the edex-environment can be run. (DR 19073)

---

#### 94. Problem: DD: Pressure Levels in Subset Manager Subscriptions are not sorted correctly

Normally, subscriptions load downward descending in the Available Levels field of the Subset Manager Pressure Levels field. As pressure levels are moved to the Selected Levels field, they are listed in the order sequence (top to bottom) that they are individually moved.

For example:

1000.0 --> 975.0

975.0 --> 5.0

...

--> 550.0

550.0 --> 1000.0

525.0 --> 10.0

...

100.0

...

50.0

20.0

10.0

5.0

However, the moment you move any pressure level back from the Selected Levels column to the Available levels column, all the pressure levels in the Available Levels field are reorder into an ascending first-digit numerical sequence:

10.0

100.0

1000.0

...

5.0

50.0

525.0

550.0

...

975.0

All other parameters that I found would be inserted into the original sequence listed in Available field without reordering.

This issue was also confirmed to exist in 16.2.1 and I expect it goes further back.

All sequences are reordered properly if the subscription is saved and the dialogs are closed and reopened.

**Operational Impact:** Minimal; difficult to find.

**Required Behavior:** Items should be sorted. (DR 19068)

---

#### 95. Problem: pypies is touching all files on repack instead of files that have changed

Pypies repack operation should only repack files that have changed. An attribute is embedded in the file to note the time of last repack. A quick of hdf5 shows the hdf5 files being touched / repacked every hour.

In data below, all the files have the same timestamp that is roughly current, including 2015 data. Timestamp should be varying based on last repack.

```
[rjpeter@dx2-oma obs]$ ls -lh /awips2/edex/data/hdf5/ffmp/FFG0124hr/
total 92M
-rwxrwxr-x 1 awips fxalpha 8.0M Feb 25 20:24 ffmp-2015-10-07-01.h5
-rwxrwxr-x 1 awips fxalpha 8.4M Feb 25 20:24 ffmp-2015-10-07-02.h5
-rwxrwxr-x 1 awips fxalpha 8.4M Feb 25 20:24 ffmp-2015-10-07-03.h5
-rwxrwxr-x 1 awips fxalpha 11M Feb 25 20:24 ffmp-2015-10-07-04.h5
-rwxrwxr-x 1 awips fxalpha 9.1M Feb 25 20:24 ffmp-2015-10-07-05.h5
-rwxrwxr-x 1 awips fxalpha 9.7M Feb 25 20:24 ffmp-2015-10-07-06.h5
-rwxrwxr-x 1 awips fxalpha 9.2M Feb 25 20:24 ffmp-2015-10-07-07.h5
-rwxrwxr-x 1 awips fxalpha 9.3M Feb 25 20:24 ffmp-2015-10-07-08.h5
-rwxrwxr-x 1 awips fxalpha 9.6M Feb 25 20:24 ffmp-2015-10-07-09.h5
-rwxrwxr-x 1 awips fxalpha 8.7M Feb 25 20:24 ffmp-2015-10-07-10.h5
-rwxrwxr-x 1 awips fxalpha 259K Feb 25 20:24 ffmp-2015-10-12-18.h5
-rwxrwxr-x 1 awips fxalpha 260K Feb 25 20:24 ffmp-2015-10-13-00.h5
-rwxrwxr-x 1 awips fxalpha 97K Feb 25 20:24 ffmp-2015-10-14-12.h5
-rwxrwxr-x 1 awips fxalpha 251K Feb 25 20:24 ffmp-2016-02-10-12.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:24 ffmp-2016-02-19-18.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:24 ffmp-2016-02-20-00.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:24 ffmp-2016-02-21-00.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:24 ffmp-2016-02-23-00.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:24 ffmp-2016-02-24-18.h5
-rwxrwxr-x 1 awips fxalpha 252K Feb 25 20:24 ffmp-2016-02-25-00.h5
-rwxrwxr-x 1 awips fxalpha 94K Feb 25 20:24 ffmp-2016-02-25-12.h5
-rwxrwxr-x 1 awips fxalpha 252K Feb 25 20:24 ffmp-2016-02-25-18.h5
[rjpeter@dx2-oma obs]$ ls -lh /awips2/edex/data/hdf5/obs
total 70M
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-09-01.h5
-rwxrwxr-x 1 awips fxalpha 1.3M Feb 25 20:26 metar-2016-02-09-15.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-09-19.h5
-rwxrwxr-x 1 awips fxalpha 1.3M Feb 25 20:26 metar-2016-02-09-20.h5
-rwxrwxr-x 1 awips fxalpha 1.2M Feb 25 20:26 metar-2016-02-10-01.h5
-rwxrwxr-x 1 awips fxalpha 1.2M Feb 25 20:26 metar-2016-02-10-04.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-12-06.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-12-11.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-13-13.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-15-01.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-15-20.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-16-04.h5
-rwxrwxr-x 1 awips fxalpha 1.4M Feb 25 20:26 metar-2016-02-16-12.h5
-rwxrwxr-x 1 awips fxalpha 1.2M Feb 25 20:26 metar-2016-02-17-12.h5
-rwxrwxr-x 1 awips fxalpha 800 Feb 25 20:26 metar-2016-02-17-14.h5
-rwxrwxr-x 1 awips fxalpha 1.2M Feb 25 20:26 metar-2016-02-18-12.h5
-rwxrwxr-x 1 awips fxalpha 1.2M Feb 25 20:26 metar-2016-02-19-12.h5
-rwxrwxr-x 1 awips fxalpha 1.2M Feb 25 20:26 metar-2016-02-20-12.h5
```

**Operational Impact:** Degraded performance.

**Required Behavior:** PyPies should only touch the files that changed. (DR 19065)

---

## 96. Problem: True Color capability only works with open GL rendering

True Color images were implemented under #28. This implementation only supports openGL rendering with shaders so our other graphics targets don't work. We should solve this by writing a true color extension that creates a BufferedImage in java and uses the generic image rendering capability to render it(see GeneralColormappedImageExtension for an example of something similar.)

True Color does not work with KML, when you export a true color resource it is disabled and the following error occurs:



```
com.raytheon.uf.viz.core.exception.VizException: Could not find valid extension for class: interface
com.raytheon.uf.viz.truecolor.extension.ITrueColorImagingExtension
at com.raytheon.uf.viz.core.drawable.ext.GraphicsExtensionManager.getExtension(GraphicsExtensionManager.java:103)
at com.raytheon.uf.viz.core.AbstractGraphicsTarget.getExtension(AbstractGraphicsTarget.java:515)
at com.raytheon.uf.viz.truecolor.rsc.TrueColorResourceGroup.initInternal(TrueColorResourceGroup.java:328)
at com.raytheon.uf.viz.core.rsc.AbstractVizResource.init(AbstractVizResource.java:374)
at com.raytheon.uf.viz.kml.export.KmlExportJob.initPanels(KmlExportJob.java:226)
at com.raytheon.uf.viz.kml.export.KmlExportJob.run(KmlExportJob.java:140)
at org.eclipse.core.internal.jobs.Worker.run(Worker.java:54)
```

True color also will not work on graphics cards that do not support shader. As far as we know there are no currently deployed systems with graphics cards that don't have shader but it is still a use case we should support.

This was discovered when Jordan Gerth added gamma to true color images. I thought he would need to update the generic extension to handle gamma but I found out we have no generic extension.

**Operational Impact:** True color for GOES-R will not work properly.

**Required Behavior:** True color should function properly. (DR 19063)

---

## 97. Problem: FSSObs has warnings with some sky covers

The following warnings were seen in edex logs on the testbeds, they happen multiple times throughout the day:

- WARN 2016-02-22 13:07:20,474 [fssobsGenerate-1] FSSObsUtils: EDEX - Get unknown sky cover SCT
- WARN 2016-02-22 13:58:08,559 [fssobsGenerate-1] FSSObsUtils: EDEX - Get unknown sky cover VV
- WARN 2016-02-22 14:15:36,054 [fssobsGenerate-1] FSSObsUtils: EDEX - Get unknown sky cover FEW

Those appear to be sky covers from METAR products. The FSSObs code probably needs to support those sky cover values. There may be more that it doesn't yet support, these three were the most common.

**Operational Impact:** Could be issues with the sky cover values.

**Required Behavior:** FSSObs code should support those sky cover values. (DR 19062)

---

## 98. Problem: Orphan purging not working

Quick scan on hdf5 still shows 44k files from 2015. Orphan purge is running and occasionally deleting files, but large chunks appear to be missed. While some of those may be old grids due to version purge, fmp for example should not have any 2015 data. Orphan purge may need to be expanded to work by purge key so that a given sub directory can be searched and cleaned up within a given plugin.

**Operational Impact:** Minimal - extra data that should have been purged still hanging around.

**Required Behavior:** All old data should be purged. (DR 19061)

### 99. Problem: Colormap names are not restored after reverting a change in the colormap

Colormap names are not restored in the Set Color Table Range or Imaging dialogs after reverting a change in the colormap.

**Operational Impact:** Forecaster could get confused by not seeing the reverted colormap.

**Required Behavior:** Displays should reflect the reverted colormap. (DR 19060)

### 100. Problem: Errors decoding profiler data

Some new errors have begun showing up regarding decoding profiler data. Attached are some sample files that seem to illustrate the problem. Upon further investigation it appears that all of the files are coming from EGRR which appears to be an airport in the United Kingdom.

```
ERROR Index: 2, Size: 0
Occurred a total of 12 times on the following machines:
dx4-oma.oma.us.ray.com: 6 occurrences
dx3-oma.oma.us.ray.com: 6 occurrences
java.lang.IndexOutOfBoundsException: Index: 2, Size: 0
at java.util.ArrayList.rangeCheck(ArrayList.java:635)
at java.util.ArrayList.get(ArrayList.java:411) ~[na:1.7.0_80]
at com.raytheon.edex.plugin.profiler.decoder.ProfilerDataAdapter.getHeaderData(ProfilerDataAdapter.java:200)
[com.raytheon.edex.plugin.profiler.jar:na]
at com.raytheon.edex.plugin.profiler.decoder.ProfilerDataAdapter.createProfilerData(ProfilerDataAdapter.java:109)

at com.raytheon.edex.plugin.profiler.ProfilerDecoder.decode(ProfilerDecoder.java:158)
[com.raytheon.edex.plugin.profiler.jar:na]
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method) ~[na:1.7.0_80]
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:57) ~[na:1.7.0_80]
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43) ~[na:1.7.0_80]
at java.lang.reflect.Method.invoke(Method.java:606) ~[na:1.7.0_80]
at org.apache.camel.component.bean.MethodInfo.invoke(MethodInfo.java:408) [camel-core-2.16.0.jar:2.16.0]
at org.apache.camel.component.bean.MethodInfo$1.doProceed(MethodInfo.java:279) [camel-core-2.16.0.jar:2.16.0]
at org.apache.camel.component.bean.MethodInfo$1.proceed(MethodInfo.java:252) [camel-core-2.16.0.jar:2.16.0]
at org.apache.camel.component.bean.BeanProcessor.process(BeanProcessor.java:177) [camel-core-2.16.0.jar:2.16.0]
at org.apache.camel.util.AsyncProcessorHelper.process(AsyncProcessorHelper.java:109) [camel-core-2.16.0.jar:2.16.0]
at org.apache.camel.component.bean.BeanProcessor.process(BeanProcessor.java:68) [camel-core-2.16.0.jar:2.16.0]
at com.raytheon.uf.edex.esb.camel.MessageProducer$2.process(MessageProducer.java:432)
[com.raytheon.uf.edex.esb.camel.jar:na]
at org.apache.camel.processor.DelegateAsyncProcessor.process(DelegateAsyncProcessor.java:91)
[camel-core-2.16.0.jar:2.16.0]
at org.apache.camel.processor.CamelInternalProcessor.process(CamelInternalProcessor.java:190)
[camel-core-2.16.0.jar:2.16.0]
```

**Operational Impact:** Data could be coded incorrectly.

**Required Behavior:** Decoded data shouldn't throw errors. (DR 19059)

### 101. Problem: Unable to delete folders in the Localization Perspective containing only USER-level files

When attempting to delete a folder that contains only USER-level files, the contents within the folder are removed, but the folder itself remains

**Operational Impact:** Minimal. There will be left over folders in localization so it would just be clutter.

**Required Behavior:** Folder should be removed when deleted. (DR 19058)

---

### 102. Problem: GiniSatelliteDecoder incorrectly orients scanMode=3 data

Discovered during code review, GiniSatelliteDecoder lines 445-446 handles scanMode=3 by performing two vertical flips (effectively a noop).

[http://weather.unisys.com/wxp/Appendices/Formats/GINI.html#scan\\_mode](http://weather.unisys.com/wxp/Appendices/Formats/GINI.html#scan_mode) says a scan mode value of 3 is a combination of scanMode=1 and scanMode=2, needing a vertical and a horizontal flip to properly orient the data.

It is unlikely that we receive data with this scan mode, as the displayed data would have appeared rotated 180 degrees.

**Operational Impact:** Data could be incorrectly displayed.

**Required Behavior:** Make sure data isn't flipped 180 degrees. (DR 19057)

---

### 103. Problem: Indices not set in IDataRecord returned from slab retrieval

When an IDataRecord is retrieved using a slab request (subset of the dataset) the indices in the record should be set to those used in the request so the data can be written back without having to set the indices.

Also the indices in the slab request are ints while those in the IDataRecord are longs. This should be consistent.

**Operational Impact:** Slightly degraded performance.

**Required Behavior:** The indices in the record should be set to those used in the request so the data can be written back without having to set the indices (DR 19053)

---

### 104. Problem: SAILS : A combination of arrow key strokes returns incorrect frames with tdwr All Tilts data

Defect in new functionality delivered with SAILS work assignment.

Found during TIM with the ROC reviewing current SAILS features. When executing a specific set of keystrokes while in the middle of a volume scan of tdwr data (VCP80), incorrect frames are displayed. Two examples are spelled out (as best as possible) within the test procedures. Procedures were written for both Build 1.

**Operational Impact:** Incorrect frames shown affects use of data during operations

**Required Behavior:** Display the correct frame based on the arrow key pressed. (DR19050 )

---

**105. Problem: Confusing chat room behavior when trying to rejoin a room that you left**

This is related to TT 727404 reported by site REV during the national test of March 24 - March 25, 2016.

The user created a room named roomfun and invited others in. He then left the room and was unable to get back in. The room did not show up in his Active Sessions on the Collaboration Information tab. He could not create a new room with the same name because the old room still existed. A user in the room tried to invite him back in, but the original creator never received the invitation.

(This is an interpretation from the TT as it is rather ambiguous about what was tried and not tried). Site reports that is partially by design. We do not want to keep spamming users with invitation boxes if they do not want to join the room. Once they have authorization by receiving the invite (or creating the room), we do not show the invite again. The authorization remains until the user logs out or the room is destroyed (ie all users leave that room), and this prevents room invitation spam. Furthermore, since the user had authorization he could have joined the room by going to the room search under the View menu (little triangle in the corner). However, the user probably did not know about the room search feature.

There are several ways we could handle this, it is not clear at this time what would be best:

1. List the room in the Active Sessions even though he departed the room, until the room no longer exists. A side effect might be rooms you did not want to join showing up in the Active Sessions. However, that side effect might be desired, because if you accidentally clicked to decline an invitation you could still go get into it by looking at Active Sessions.
2. Pop up the invitation and allow him back into the room, but this would require some special handling to ensure invitations cannot be spammed. Possibly a timer?
3. Attempt to spread education about the room search capability.
4. Attempt to make the room search capability more noticeable....somehow.
5. Handle a case where someone tries to create an existing room with the same name, potentially popping up a different box allowing them to join it if they already had authorization.

**Operational Impact:** If the chat room originator leave the chat room they cannot rejoin.

**Required Behavior:** One you leave a chat room you should be able to rejoin. (DR 19047)

---

**106. Problem: Prints from Python to stdout no longer appear in the CAVE console log**

Not sure when this happened but Python print statements from GFE smartTools and procedures are no longer captured in the

cave\_\*\_console.log file.

Since the field tends to use print statements instead of proper logging via LogStream or some other method these are lost making troubleshooting more difficult.

Printing to system.out in Java still appears in the console logs.

**Operational Impact:** N/A - this only make troubleshooting issue harder.

**Required Behavior:** Print statements should be in the log files. (DR 19046)

### 107. Problem: AWIPS 2 parameter lookups in DD should allow for Wind barb drawing etc.

In phase one of this issue #4566 the parameter matching configuration files were updated to use uV and uW, etc.

So now the derived parameters in AWIPS 2 setup can use the correct already derived parameter calculations.

Make the necessary changes to the DD

**Operational Impact:** parameter lookups should allow for wind barb drawing

**Required Behavior:** minimal (DR 19045)

### 108. Problem: MPE: Unhandled event loop exception when adding a pseudo gage

Received the following AV error when attempting to add a pseudo gage to an MPE display. Investigation by the developer found that this error occurs only if no MPE data is available on the system.:

```

Unhandled event loop exceptionjava.lang.IndexOutOfBoundsException: Index: 0, Size: 0
at java.util.ArrayList.rangeCheck(ArrayList.java:635)
at java.util.ArrayList.get(ArrayList.java:411)
at com.raytheon.viz.mpe.ui.dialogs.AddPseudoGageDialog.updateRWR(AddPseudoGageDialog.java:298)
at com.raytheon.viz.mpe.ui.dialogs.AddPseudoGageDialog.writePGage(AddPseudoGageDialog.java:291)
at com.raytheon.viz.mpe.ui.dialogs.AddPseudoGageDialog$2.widgetSelected(AddPseudoGageDialog.java:225)
at org.eclipse.swt.widgets.TypedListener.handleEvent(TypedListener.java:248)
at org.eclipse.swt.widgets.EventTable.sendEvent(EventTable.java:84)
at org.eclipse.swt.widgets.Widget.sendEvent(Widget.java:1276)
at org.eclipse.swt.widgets.Display.runDeferredEvents(Display.java:3562)
at org.eclipse.swt.widgets.Display.readAndDispatch(Display.java:3186)
at org.eclipse.ui.internal.Workbench.runEventLoop(Workbench.java:2701)
at org.eclipse.ui.internal.Workbench.runUI(Workbench.java:2665)
at org.eclipse.ui.internal.Workbench.access$4(Workbench.java:2499)
at org.eclipse.ui.internal.Workbench$7.run(Workbench.java:679)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:332)
at org.eclipse.ui.internal.Workbench.createAndRunWorkbench(Workbench.java:668)
at org.eclipse.ui.PlatformUI.createAndRunWorkbench(PlatformUI.java:149)
at com.raytheon.viz.ui.personalities.awips.AbstractCAVEComponent.startComponent(AbstractCAVEComponent.java:265)
at com.raytheon.uf.viz.application.VizApplication.start(VizApplication.java:97)
at org.eclipse.equinox.internal.app.EclipseAppHandle.run(EclipseAppHandle.java:196)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.runApplication(EclipseAppLauncher.java:110)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.start(EclipseAppLauncher.java:79)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:353)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:180)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:57)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:606)

```

at org.eclipse.equinox.launcher.Main.invokeFramework(Main.java:629)  
 at org.eclipse.equinox.launcher.Main.basicRun(Main.java:584)  
 at org.eclipse.equinox.launcher.Main.run(Main.java:1438)  
 at org.eclipse.equinox.launcher.Main.main(Main.java:1414)

**Operational Impact:** Minimal - this only occurs if there is no data in the system.

**Required Behavior:** Code should not throw an UELE error. (DR 19044)

---

## 109. Problem: Graceful shutdown stopped an internal route too early

Nightly build found an instance where the shef directvm endpoint was shutdown before a jms endpoint.

```
ERROR No consumers available on endpoint:Endpoint[direct-vm//shefProcessing]. Exchange[JmsMessage[JmsMessageID:
ID:0c8cb9b0-ff15-35d1-b7fb-91799e304c09]]
Occurred a total of 1 times on the following machines:
dx3-oma.oma.us.ray.com: 1 occurrences
org.apache.camel.component.directvm.DirectVmConsumerNotAvailableException: No consumers available on endpoint:
Endpoint[direct-vm//shefProcessing]. Exchange[JmsMessage[JmsMessageID: ID:0c8cb9b0-ff15-35d1-b7fb-91799e304c09]]
```

```
at org.apache.camel.component.directvm.DirectVmProducer.process(DirectVmProducer.java:51)

at org.apache.camel.processor.SendProcessor.process(SendProcessor.java:110) ~[camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.util.AsyncProcessorHelper.process(AsyncProcessorHelper.java:105) [camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.processor.SendProcessor.process(SendProcessor.java:86) ~[camel-core-2.12.3.jar:2.12.3]
at com.raytheon.uf.edex.esb.camel.MessageProducer$2.process(MessageProducer.java:399)
[com.raytheon.uf.edex.esb.camel.jar:na]
at org.apache.camel.processor.DelegateAsyncProcessor.process(DelegateAsyncProcessor.java:91)
[camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.processor.RedeliveryErrorHandler.process(RedeliveryErrorHandler.java:398)
~[camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.processor.CamelInternalProcessor.process(CamelInternalProcessor.java:191)
[camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.processor.Pipeline.process(Pipeline.java:118) [camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.processor.Pipeline.process(Pipeline.java:80) [camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.processor.CamelInternalProcessor.process(CamelInternalProcessor.java:191)
[camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.util.AsyncProcessorHelper.process(AsyncProcessorHelper.java:105) [camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.processor.DelegateAsyncProcessor.process(DelegateAsyncProcessor.java:87)
[camel-core-2.12.3.jar:2.12.3]
at org.apache.camel.component.jms.EndpointMessageListener.onMessage(EndpointMessageListener.java:103)
[camel-jms-2.12.3.jar:2.12.3]
at
org.springframework.jms.listener.AbstractMessageListenerContainer.doInvokeListener(AbstractMessageListenerContainer.java:562) [sprin
:562] [spring-jms-3.2.8.RELEASE.jar:3.2.8.RELEASE]
at
org.springframework.jms.listener.AbstractMessageListenerContainer.invokeListener(AbstractMessageListenerContainer.java:500) [spring-j
00] [spring-jms-3.2.8.RELEASE.jar:3.2.8.RELEASE]
at
org.springframework.jms.listener.AbstractMessageListenerContainer.doExecuteListener(AbstractMessageListenerContainer.java:468) [spr
va:468] [spring-jms-3.2.8.RELEASE.jar:3.2.8.RELEASE]
at
org.springframework.jms.listener.AbstractPollingMessageListenerContainer.doReceiveAndExecute(AbstractPollingMessageListenerContai
tainerContainer.java:325) [spring-jms-3.2.8.RELEASE.jar:3.2.8.RELEASE]
at
org.springframework.jms.listener.AbstractPollingMessageListenerContainer.receiveAndExecute(AbstractPollingMessageListenerContai
erContainer.java:263) [spring-jms-3.2.8.RELEASE.jar:3.2.8.RELEASE]
at
org.springframework.jms.listener.DefaultMessageListenerContainer$AsyncMessageListenerInvoker.invokeListener(DefaultMessageLis tene
sageListenerContainer.java:1101) [spring-jms-3.2.8.RELEASE.jar:3.2.8.RELEASE]
at
org.springframework.jms.listener.DefaultMessageListenerContainer$AsyncMessageListenerInvoker.executeOngoingLoop(DefaultMessag e
```



```
ultMessageListenerContainer.java:1093) [spring-jms-3.2.8.RELEASE.jar:3.2.8.RELEASE]
at org.springframework.jms.listener.DefaultMessageListenerContainer$AsyncMessageListenerInvoker.run(DefaultMessageListenerContainer
erContainer.java:990) [spring-jms-3.2.8.RELEASE.jar:3.2.8.RELEASE]
at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1145) [na:1.7.0_55]
at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:615) [na:1.7.0_55]
at java.lang.Thread.run(Thread.java:745) [na:1.7.0_55]
```

**Operational Impact:** Looks as if a message doesn't get sent out. Hard to tell from the error message.

**Required Behavior:** Unhandled event loop should not be thrown. (DR 19043)

---

### 110. Problem: MPE - UELE error received when opening Gages->QC Freezing Level

When testing QC Freezing Level, I can repeat getting an unhandled event loop exception. See test steps.

**Operational Impact:** Not entirely sure. There is an array out of bound issue but it doesn't appear to cause any issues at this time.

**Required Behavior:** Code should not have array indexing issues and should not throw errors to AlertViz. (DR 19042)

---

### 111. Problem: MPE - Opening multiple/concurrent QC dialogs should not be permitted

In MPE, there are three QC dialogs that can each display multiple instances of the same dialog: QC Precipitation, QC Temperatures, and QC Freezing Level. Only a single instance of any of the three can be displayed at any time. Each QC dialog should display a single instance of the QC dialog.

**Operational Impact:** the forecaster can get confused on which of the same dialogs will perform the task.

**Required Behavior:** Only one dialog should be allowed to be open at one time. (DR 19041)

---

### 112. Problem: MPE: PseudoGage displayed different value from what was set in the Gage Table

While testing the MPE functionality, we found that when we modified the value for a PseudoGage using the Gage Table, the updated value when the gage was regenerated did not match the value we had set. However, changes made for an actual gage were properly displayed. We confirmed this issue on both AWIPS OB13.5.2 and on AWIPS OB13.6.1.

Screenshots GageTable\_PseudoGage\_1\_Init.png and GageTable\_PseudoGage\_2\_BadValue.png show the initial setting and the final bad value result

**Operational Impact:** Forecaster do not accurate information.

**Required Behavior:** The PseudoGage should display the correct value. (DR 19040)



**113. Problem: Registry drops replication event tables when restarted**

When a registry or central registry restarts, it checks if the DB is valid compared to the configuration. Due to a bug in the comparison in the base DbInit, the tables from FederationDBInit are found to be invalid and the registryreplicationevents table, which tracks all events that may need replicated, gets dropped. This could cause any events in this table that still need replicated to be lost and never replicated to the other sites and won't be recovered until that site synchronizes again. However, dropping these events won't trigger the need for a synchronize, so that won't happen unless other conditions are met.

**Operational Impact:** Restarting central registry will lose any pending replication events causing downstream registry to be out of sync. This will cause data loss, subscriptions not to be notified, etc. The only way to regain lost events is for downstream registry to be down for 2 days or for their database to be blown away and recreated.

**Required Behavior:** Restarting central registry does not lose pending replication events on restart. (DR 19031)

**114. Problem: Shefdecoder fails to automatically create an entry in the IngestFilter database table when token shef\_load\_ingest is ON**

When the token shef\_load\_ingest is ON, the shefdecoder supposes to load the location-PEDTSE entry to the IngestFilter if it is not previously defined. Here is an example at BOU:

The contingencyvalue table has (ATWC2, HG, 0, CY, Z):

```
hd_ob92bou=# select * from contingencyvalue where lid='ATWC2' and ts='CY';
 lid | pe | dur | ts | extremum | probability | validtime | basistime | value | shef_qual_code |
 quality_code | revision | product_id | producttime | postingtime
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
--+-+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
ATWC2 | HG | 0 | CY | Z | -1 | 2016-05-16 06:00:00 | 2016-05-11 14:14:00 | 6 | Z | 1879048191 |
1 | KKRFR9BOU | 2016-05-11 15:18:00 | 2016-05-11 15:18:40
```

but the ingestfilter table does not:

```
hd_ob92bou=# select * from ingestfilter where lid='ATWC2' and ts='CY';
 lid | pe | dur | ts | extremum | ts_rank | ingest | ofs_input | stg2_input
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
(0 rows)
```

although the shef\_load\_ingest is ON:

```
dx1-bou:ncfuser:1025$ grep shef_load_ingest
/awips2/edex/data/utility/common_static/base/hydro/Apps_defaults
shef_load_ingest : ON # ON/OFF - automatically load the IngestFilter table or not
```

**Operational Impact:** If the location-PEDTSE entry is not in the IngestFilter table, the TimeSeries application will not display the data and RiverPro will not be able to see the data, either.

**Required Behavior:** The shefdecoder loads the location-PEDTSE entry to the IngestFilter if shef\_load\_ingest is ON (DR 19001)

---

### 115. Problem: The width of the 'Add Notifier to' dropdown menu is too small; initially loads name with right justified formatting

When initially opening up the Add Notifier dialog via Collaboration, the name displayed in the 'Add Notifier to' section is cut off from the beginning of the name (e.g., it reads 'ort Term Forecaster 1'). After changing the selection to another name and back to the originally displayed name, the name is left justified...and displays as 'OAX Short Term Forec'. While some names will be longer than others, there is space in the dialog to expand the width of the dropdown menu. In cases where names are still longer than the width of the menu, the name should still display left justified when initially opening up the Add Notifier dialog.

**Operational Impact:** The beginning of the username text is cut off if name is too long.

**Required Behavior:** In cases where names are still longer than the width of the menu, the name should still display left justified when initially opening up the Add Notifier dialog. (DR 19000)

---

### 116. Problem: Provide ability to see jids (i.e. usernames) in Collaboration tab

This came from TT 725983. Ulysses Davis of Western Region HQ would like to see real names of users in the Collaboration Information tab as a tooltip. He reports that he can see real names in the nws-collaboration room when hovering over a participant.

See attached screenshots he provided. Whether or not a name/jid is shown in a room is dependent on the room settings. See attached screenshot of Openfire Room Settings. There is no setting in Openfire or XMPP for hiding jids in contacts list, we just happened to not show them on that tab.

**Operational Impact:** None

**Required Behavior:** Implement additional logging messages for Collaboration (DR 18999)

---

**117. Problem: Collaboration needs more advanced logging to properly diagnose issues**

The recent national test of collaboration on March 24 - March 25, 2016 revealed that we need to log certain actions better to diagnose problems. Specifically some of the following items have been identified:

1. Log when a user logs in
2. Log when a user logs out
3. Log when a user receives an invitation
4. Log whether or not the user accepted the invitation
5. Log a count of total history messages shown / total history messages received (ie how many messages were NOT filtered in the nws-collaboration room and how many did we receive)
6. There is a log message in ServerFeatureCache that says "Failed to get features from server, trying again in 1000 milliseconds."

We should log when that is successful because otherwise it is unclear when reading the logs when it was successful.

We should potentially increase the default preference for "max chat room history message age in minutes". This is sent to the chat server so an increase may have performance implications but may be preferred by users. We may also need to increase the number kept on the server, it's unclear if we hit that max or not during the test.

We in theory should be able to determine history messages filtered vs unfiltered because we send a presence update to the chat room and all history messages (which are asynchronous) will be received by the time our own presence update comes back around.

**Operational Impact:** None

**Required Behavior:** Implement additional logging messages for Collaboration (DR 18998)

---

**118. Problem: Collaboration Server Login window can be opened multiple times**

It is possible and confusing to open the Collaboration Server Login window multiple times. It should not be possible. The window is always above CAVE so it would be hard to do this accidentally but we should still make it impossible.

**Operational Impact:** No operational impact. May cause confusion.

**Required Behavior:** Allow only one open login dialog (DR 18994)

---

**119. Problem: Add a double click option in the Room Search dialog to join a room**

In the Room Search dialog, a user must MB3 click on a room and select the Join Room option to join the selected room. Double clicking the room currently does nothing. Add the functionality that allows a user to join a room by double clicking on a room.

**Operational Impact:** None other than a slight inconvenience of extra mouse clicks.

**Required Behavior:** Add the functionality that allows a user to join a room by double clicking on a room. (DR 18992)

---

**120. Problem: Chat scrollbar can be positioned incorrectly when switching tabs**

From the national collaboration test of March 10, 2016, we received the following report from BCQ:

"In Collaboration, I have the normal ""nws-collaboration"" room open, plus a second chat tab. When switching from nws-collaboration to the ""second"" chat tab, the scrollbar is always just up from the bottom, effectively hiding the last line of text in the room"

Note that this only appears to be a problem in rooms, not private chats or the nws-collaboration room. The scrollbar's position is correctly remembered when switching between tabs except when it is near the very bottom, as mentioned in the BCQ report.

**Operational Impact:** Users may miss latest chat message in chat room when switching between chat/room tabs.

**Required Behavior:** The scrollbar should always be scrolled all the way to the bottom of chat rooms so users can see the latest messages. (DR 18991)

---

**121. Problem: VIR switch updates to access new ats1 ssh port**

Telnet is being disabled to the new awips terminal servers as part of security findings. The /awips/ops/bin/vir\_switch script is run as part of a2px1apps. It connects to the VIR switch and spares over the connections to the one where the package is running (the connections into px1 or px2).

The script currently does it by telneting through the ats1 into the port for the VIR switch. The script will need to be updated to use ssh to connect through the ats1 into the VIR switch.

This is not release specific, but breaks when the new awips terminal servers are installed.

**Operational Impact:** In the event of a package failover, the VIR panel will not switch over to the connections where the package will be running. The VIR panel is used as a bridge for serial connections from the PXs and external serial destinations. The asyncScheduler is the program which sends out products over this serial connection. If one PX fails, and asyncScheduler starts running on the other PX, and the VIR panel does not switch over as well, then products that asyncScheduler sends out over the serial connection will not be received at the serial destination.

**Required Behavior:** The VIR switch fails from A->B when the a2px1apps package fails to px2. (DR 18985)

---

## 122. Problem: 16.4.1 Build and Merge Support

The actions covered under this DCS are to simplify and streamline the process of building, merging, and installing new builds.

**Operational Impact:** Builds may be broken without resolving merge conflicts or build changes.

**Required Behavior:** Successful build (DR 18972)

---

## 123. Problem: Fix FOSS manifest version numbers

There are some version numbers in the manifest for FOSS projects that have entries that don't match the version of the FOSS they contain.

`./lib/com.sun.xml.bind/META-INF/MANIFEST.MF:Bundle-Version: 1.0.0.qualifier`

`./lib/de.micromata.opengis.kml/META-INF/MANIFEST.MF:Bundle-Version: 1.0.0.qualifier`

`./lib/edu.mit.ll.netcdf.linux64/META-INF/MANIFEST.MF:Bundle-Version: 1.3.0.qualifier`

`./lib/edu.mit.ll.netcdf/META-INF/MANIFEST.MF:Bundle-Version: 1.3.0.qualifier`

`./lib/edu.uci.ics.crawler4j/META-INF/MANIFEST.MF:Bundle-Version: 1.0.0.qualifier`

`./lib/javax.activation/META-INF/MANIFEST.MF:Bundle-Version: 1.0.0.qualifier`

`./lib/javax.mail/META-INF/MANIFEST.MF:Bundle-Version: 1.0.0.qualifier`

`./lib/javax.media.opengl.win64/META-INF/MANIFEST.MF:Bundle-Version: 1.14.0.qualifier`

`./lib/net.dods/META-INF/MANIFEST.MF:Bundle-Version: 1.1.7.qualifier`

`./lib/org.apache.commons.cli/META-INF/MANIFEST.MF:Bundle-Version: 1.0.0.qualifier`

`./lib/org.apache.commons.net/META-INF/MANIFEST.MF:Bundle-Version: 3.3.0.qualifier`

`./lib/org.apache.log4j/META-INF/MANIFEST.MF:Bundle-Version: 1.0.0.qualifier`

`./lib/org.objectweb/META-INF/MANIFEST.MF:Bundle-Version: 1.0.0.qualifier`

These should be changed to the actual version of the FOSS contained in the project or at least have the qualifier removed since FOSS version should be stable and not appended with the time stamp of the PDE build.

**Operational Impact:** N/A

**Required Behavior:** The version numbers in the manifest for FOSS projects should match the actual version of the FOSS contained in the project. (DR 18970)

---

**124. Problem: Novra S300 DVB Receiver Monitoring and Collection Tool**

Develop a set of tools for monitoring the status of the Novra S300 DVB receivers used to convert the SBN satellite DVB RF signal into separate Ethernet Multicast streams. These tools will replace the existing tools that use Novra's cmcs program, which is known to interfere with the SBN Multicast data streams. The replacement tools will consist of a daemon that listens to the regular status messages broadcast by the S300, and at least one client that either displays or logs the results in any of several pre-defined formats.

**Operational Impact:** All of the currently employed methods for checking the status of the DVB receiver use the Novra 'cmcs' program. There are two persistent processes that constantly poll the receiver every few seconds and log the results. cmcs is known to interrupt the Multicast data stream resulting in missed products.

**Required Behavior:** DVB monitoring must not negatively affect the data stream. (DR 18959)

---

**125. Problem: D2D: NLDN and ENTLN stats plotting incorrectly**

The strikes counts in the upper left corner are being plotted in one default location resulting in all the numbers plotted on top of one another, so nothing can be read. A parameter needs to be added to several xml files, namely LightningCloudSeq.xml, LightningPulseSeq.xml, LightningSeq.xml to specify the offset for the plotted string.

**Operational Impact:** Without the applied work around it would be difficult to decipher the strike count for each sequence. Since there is a work around, the impact on operations is minimal.

**Required Behavior:** The strike count should be plotted legibly for each sequence. (DR 18953)

---

**126. Problem: D2D display of CIMSS Probability Severe Model sometimes throws Paint error**

RNK and MKX sites reported, with CIMSS Probability Severe Model displayed in D-2D, an alertviz error sometimes occurs. When it occurs, the product legend grays out and the display goes blank. Clicking the legend turns it back on. Robert Beasley says this occurs while looping the product. NCF was able to reproduce as aocuser on lx1-rnk.

Here is the error:

```
ERROR 2016-04-27 01:18:04,546 [main] CaveLogger: Paint error: null:: The resource [NOAA/CIMSS Prob Severe Model ()]
has been disabled.
com.raytheon.uf.viz.core.exception.VizException: Paint error: null:: The resource [NOAA/CIMSS Prob Severe Model ()]
has been disabled.
at
com.raytheon.uf.viz.core.drawables.AbstractRenderableDisplay.paintResource(AbstractRenderableDisplay.java:627)
at com.raytheon.uf.viz.core.maps.display.MapRenderableDisplay.paint(MapRenderableDisplay.java:180)
at com.raytheon.uf.viz.d2d.core.map.D2DMapRenderableDisplay.paint(D2DMapRenderableDisplay.java:221)
at com.raytheon.viz.ui.panes.VizDisplayPane.giDrawInternal(VizDisplayPane.java:523)
at com.raytheon.viz.ui.panes.VizDisplayPane.draw(VizDisplayPane.java:477)
at com.raytheon.viz.ui.panes.DrawCoordinatedPane.draw(DrawCoordinatedPane.java:172)
```

```

at com.raytheon.viz.ui.panes.DrawCoordinatorJob$.run(DrawCoordinatorJob.java:196)
at org.eclipse.ui.internal.UIEventListener.doPendingWork(UIEventListener.java:164)
at org.eclipse.ui.internal.UISynchronizer$.run(UISynchronizer.java:158)
at org.eclipse.swt.widgets.RunnableLock.run(RunnableLock.java:35)
at org.eclipse.swt.widgets.Synchronizer.runAsyncMessages(Synchronizer.java:135)
at org.eclipse.swt.widgets.Display.runAsyncMessages(Display.java:3537)
at org.eclipse.swt.widgets.Display.readAndDispatch(Display.java:3189)
at org.eclipse.ui.internal.Workbench.runEventLoop(Workbench.java:2701)
at org.eclipse.ui.internal.Workbench.runUI(Workbench.java:2665)
at org.eclipse.ui.internal.Workbench.access$4(Workbench.java:2499)
at org.eclipse.ui.internal.Workbench$7.run(Workbench.java:679)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:332)
at org.eclipse.ui.internal.Workbench.createAndRunWorkbench(Workbench.java:668)
at org.eclipse.ui.PlatformUI.createAndRunWorkbench(PlatformUI.java:149)
at
com.raytheon.uf.viz.personalities.cave.component.CAVEApplication.startComponent(CAVEApplication.java:174)
at com.raytheon.uf.viz.application.VizApplication.start(VizApplication.java:97)

```

4/27/2016 03:11:39 JeremyG

```

at com.raytheon.uf.viz.application.VizApplication.start(VizApplication.java:97)
  at org.eclipse.equinox.internal.app.EclipseAppHandle.run(EclipseAppHandle.java:196)
  at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.runApplication(EclipseAppLauncher.java:110)
  at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.start(EclipseAppLauncher.java:79)
  at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:353)
  at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:180)
  at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
  at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:57)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
  at java.lang.reflect.Method.invoke(Method.java:606)
  at org.eclipse.equinox.launcher.Main.invokeFramework(Main.java:629)
  at org.eclipse.equinox.launcher.Main.basicRun(Main.java:584)
  at org.eclipse.equinox.launcher.Main.run(Main.java:1438)
  at org.eclipse.equinox.launcher.Main.main(Main.java:1414)
Caused by: java.lang.NullPointerException: null
  at edu.wisc.ssec.cimss.viz.convectprob.rsc.ConvectProbResource.paintInternal(ConvectProbResource.java:316)
  at com.raytheon.uf.viz.core.rsc.AbstractVizResource.paint(AbstractVizResource.java:510)
  at
  com.raytheon.uf.viz.core.drawables.AbstractRenderableDisplay.paintResource(AbstractRenderableDisplay.java:624)
  ... 34 common frames omitted

```

-----  
The ingest and display of this product was implemented by the CIMSS dev org under DCS 15298.

More information reported 5/6/16 by UNR in TT 733424:

User had Radar Composite with surrounding radars and the CIMSS Prob Severe plotted. And then they added the local & regional warnings, which caused the error:

#### WORKSTATION

##### CAVE

Paint error: Cannot add new coordinates, shape has already been compiled. Must initialize shape to modify:: The resource [NOAA/CIMSS Prob Severe Model ()] has been disabled.

VPaint error: Cannot add new coordinates, shape has already been compiled. Must initialize shape to modify:: The resource [NOAA/CIMSS Prob Severe Model ()] has been disabled.com.raytheon.uf.viz.core.exception.VizException: Paint error: Cannot add new coordinates, shape has already been compiled. Must initialize shape to modify:: The resource [NOAA/CIMSS Prob Severe Model (%)] has been disabled.

```

at
com.raytheon.uf.viz.core.drawables.AbstractRenderableDisplay.paintResource(AbstractRenderableDisplay.java:627)
at com.raytheon.uf.viz.core.maps.display.MapRenderableDisplay.paint(MapRenderableDisplay.java:180)
at com.raytheon.uf.viz.d2d.core.map.D2DMapRenderableDisplay.paint(D2DMapRenderableDisplay.java:222)
at com.raytheon.viz.ui.panes.VizDisplayPane.gDrawInternal(VizDisplayPane.java:523)
at com.raytheon.viz.ui.panes.VizDisplayPane.draw(VizDisplayPane.java:477)
at com.raytheon.viz.ui.panes.DrawCoordinatedPane.draw(DrawCoordinatedPane.java:172)
at com.raytheon.viz.ui.panes.DrawCoordinatorJob$.run(DrawCoordinatorJob.java:196)
at org.eclipse.ui.internal.UIEventListener.doPendingWork(UIEventListener.java:164)
at org.eclipse.ui.internal.UISynchronizer$.run(UISynchronizer.java:158)
at org.eclipse.swt.widgets.RunnableLock.run(RunnableLock.java:35)

```



```

at org.eclipse.swt.widgets.Synchronizer.runAsyncMessages(Synchronizer.java:135)
at org.eclipse.swt.widgets.Display.runAsyncMessages(Display.java:3537)
at org.eclipse.swt.widgets.Display.readAndDispatch(Display.java:3189)
at org.eclipse.ui.internal.Workbench.runEventLoop(Workbench.java:2701)
at org.eclipse.ui.internal.Workbench.runUI(Workbench.java:2665)
at org.eclipse.ui.internal.Workbench.access$4(Workbench.java:2499)
at org.eclipse.ui.internal.Workbench$7.run(Workbench.java:679)
at org.eclipse.core.databinding.observable.Realm.runWithDefault(Realm.java:332)
at org.eclipse.ui.internal.Workbench.createAndRunWorkbench(Workbench.java:668)
at org.eclipse.ui.PlatformUI.createAndRunWorkbench(PlatformUI.java:149)
at
com.raytheon.uf.viz.personalities.cave.component.CAVEApplication.startComponent(CAVEApplication.java:174)
at com.raytheon.uf.viz.application.VizApplication.start(VizApplication.java:97)
at org.eclipse.equinox.internal.app.EclipseAppHandle.run(EclipseAppHandle.java:196)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.runApplication(EclipseAppLauncher.java:110)
at org.eclipse.core.runtime.internal.adaptor.EclipseAppLauncher.start(EclipseAppLauncher.java:79)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:353)
at org.eclipse.core.runtime.adaptor.EclipseStarter.run(EclipseStarter.java:180)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:57)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:606)
at org.eclipse.equinox.launcher.Main.invokeFramework(Main.java:629)
at org.eclipse.equinox.launcher.Main.basicRun(Main.java:584)
at org.eclipse.equinox.launcher.Main.run(Main.java:1438)
at org.eclipse.equinox.launcher.Main.main(Main.java:1414)
Caused by: java.lang.RuntimeException: Cannot add new coordinates, shape has already been compiled. Must initialize
shape to modify
at com.raytheon.viz.core.gl.GLGeometryObject2D.addSegment(GLGeometryObject2D.java:222)
at com.raytheon.viz.core.gl.internal.GLWireframeShape2D.addLineSegment(GLWireframeShape2D.java:200)
at com.raytheon.viz.core.gl.internal.GLWireframeShape2D.addLineSegment(GLWireframeShape2D.java:188)
at edu.wisc.ssec.cimss.viz.convectprob.rsc.ConvectProbResource.paintInternal(ConvectProbResource.java:320)
at com.raytheon.uf.viz.core.rsc.AbstractVizResource.paint(AbstractVizResource.java:510)
at
com.raytheon.uf.viz.core.drawables.AbstractRenderableDisplay.paintResource(AbstractRenderableDisplay.java:624)
... 34 more
%%%

```

**Operational Impact:** Product is used during severe weather. Error causes distraction and inconvenience.

**Required Behavior:** No paint errors popping up when CIMSS Probability Severe Model is displayed in D2D (DR 18946)

---

## 127. Problem: CAVE Collaboration plugin should have BASE config.xml

In the Localization perspective, CAVE -> Plugin Configs -> com.raytheon.uf.viz.collaboration.ui is missing a BASE-level config.xml file. A USER level version is created when an AWIPS users changes their collaboration preferences, but without a base file one cannot determine the various configuration options.

Request: Make a BASE com.raytheon.uf.viz.collaboration.ui/config.xml available. The options may be commented out by default so they are not activated.

(Developer note: The base com.raytheon.uf.viz.collaboration.ui/config.xml should probably simply have the default values active and not commented out.)

**Operational Impact:** Inconvenience to administrators / focal points

**Required Behavior:** CAVE should come with BASE config.xml for the Collaboration plugin. (DR 18943)

---

**128. Problem: GFE: Product Editor not wrapping first line of text**

Billings WFO reported an issue with the Product Editor in Format Launcher when they upgrade to OB16.1.1. They have local formatters that allow forecasters to edit simple paragraphs of text that are saved to WRK pils in the text database and are used to compose their AFD product. It was found that autowrap did not work for the first line of text in the editor as it did for the rest of the text.

One way to test is to open a hazard formatter without any hazard grids. When the formatter runs the text "NO HAZARDS TO REPORT" will be put in the editor. Then either enter text manually or copy text to the editor.

Most sites do not encounter this problem because usually the first line is taken up by the header. Billings encounters this issue when they write a paragraph of text to later cut and paste into the AFD product.

**Operational Impact:** Slows down operation as forecasters have to manually break the line.

**Required Behavior:** Autowrap works properly on the first line of text in product editor. (DR 18940)

---

**129. Problem: Generalize WMOHeader class regular expression to eliminate LightningWMOHeader class.**

DR #18763 was originally created to address the issue of some lightning data being incorrectly decoded. The solution to this DR was to create a special class (LightningWMOHeader) due to perceived mutual exclusivity of requirements for the WMO Header for lightning messages and all the others. This solution was recognized as not perfect but acceptable considering the limited testing time available and the risk of affecting considerable majority of incoming for decoding products since WMOHeader class is the base class used in decoding the WMO Headers for incoming products.

This DR's goal is to eliminate the LightningWMOHeader and find the more general solution to be contained within the WMOHeader class.

**Operational Impact:** Incorrect/incomplete decoding of lightning data can impact severe weather operations, especially during thunderstorm season

**Required Behavior:** WMOHeader class should be able to handle both binary and ASCII products without any problems. (DR 18939)

---

**130. Problem: Warning expiration notice message appears immediately after issuing a warning in simulated time**

In DRs #17871 and #17872, a simulated time mode for Warngen in Build 16.1.1 was instituted by adding

-Dallow.transmit.in.simulated.time=true

to the end of cave.ini. When this flag is set true, then warngen works when the CAVE clock is set backwards for simulated time. After a warning is issued, a message box immediately appears that the warning will expire soon. This message is supposed to appear when there are 10 minutes left in the warning.

This issue can be traced to notify/NotifyExpiration.java in com.raytheon.viz.texteditor where a timer is set using the system time and the warning expiration time. When the -Dallow.transmit.in.simulated.time flag is set to true, then the timer needs to incorporate the simulated time which can be done by calculating the offset between the simulated time and the system time and incorporating this offset when setting the timer.

WES-2 Bridge is not required to test this issue. Just set the flag and manually set the CAVE time backwards prior to issuing a warning.

**Operational Impact:** Forecasters are not alerted properly at the correct time when a warning is about to expire during a WES-2 Bridge simulation.

**Required Behavior:** The warning expiration notice should not appear immediately after issuing a warning when the CAVE time is using simulated time (in the past) and when the -Dallow.transmit.in.simulated.time=true flag is set in cave.ini. The notice should appear when the CAVE time reaches 10 minutes prior to the expiration time of the warning. (DR 18908)

---

### 131. Problem: Warngen pathcasts do not work with WES-2 Bridge in simulated time

In DRs #17871 and #17872, a simulated time mode for Warngen in Build 16.1.1 was instituted by adding

```
-Dallow.transmit.in.simulated.time=true
```

to the end of cave.ini. When this flag is set true, then warngen works when the CAVE clock is set backwards for simulated time. When the pathcasts option is chosen in a severe thunderstorm or tornado warning when simulated time is in effect, the system cannot find points within the polygon. The Wx.java code in com.raytheon.viz.warngen.gis appears to use the system time to calculate the pathcast locations (~line 280-290).

We noticed this behavior occurring with 14.2.4 and this part of Wx.java has not changed substantially between 14.2.4 and 16.2.1. Wx.java needs to know about the allow.transmit.in.simulated.time flag and use simulated time in calculating pathcast locations when the flag is true.

There are no workarounds for this issue.

WES-2 Bridge is not required to test this issue. Just set the flag and manually set the CAVE time backwards prior to issuing a warning with a pathcast.

**Operational Impact:** Forecasters can't practice issuing warnings containing pathcasts during a WES-2 Bridge simulation.

**Required Behavior:** Pathcasts should populate with locations inside the warning polygon when the CAVE time is using simulated time (in the past) and when the –  
Dallow.transmit.in.simulated.time=true flag is set in cave.ini. (DR 18907)

---

### 132. Problem: CAVE shutdown closes Views before initiating closing process

The nature of the problem is that when the user has already opened a View (terminology used in Eclipse RCP parlance), like the Ensemble Tool's view, in CAVE and then attempts to close CAVE, the order with which CAVE's VizWorkbenchAdvisor closes the View should happen after the closing process is initiated. In this way, calls to the workbench isClosing method will return the wrong response of false when the workbench actually is closing. More specifically, selecting the OK button in CAVE's "Are you sure you want to exit?" dialog, the shutdown process for any of the workbench views is called before the workbench knows it is shutting down. As such, tools based on Views (such as the Ensemble Tool) can call the workbench's isClosing method (i.e. to see if the workbench is actually closing) but CAVE will return false (not shutting down) when it should be returning true (is shutting down).

Impact of not Approving: The Ensemble Tool appears to be broken.

**Operational Impact:** It is an annoyance to the field user.

**Required Behavior:** When tools based on Views (such as the Ensemble Tool) call the workbench's isClosing method (i.e. to see if the workbench is actually closing) but CAVE should return true (is shutting down). (DR 18897)

---

### 133. Problem: UELE/paint errors in Hydro perspective point data control

RNK reported an issue they're seeing with the Hydro perspective's Point Data control application. When opening it and then going in and changing presets, he gets several Alertviz banners, with messages such as UELEs, paint errors, etc. (attached error\_file) Presently he's running the Hydro perspective on xt4, but this occurs for other users on other workstations too.

Also, Pete reported they had about the same type of issue with the PDC application back in November, which was written up in TT 713415 (15.1.2 build). That ticket has since been closed.

**Operational Impact:** This is a serious problem according to the site. When the error occurs, the gages are not displayed, CAVE has to be restarted, and it is a serious impact when in the middle of operations.

**Required Behavior:** The user should be able to change the preset in the point data control window. (DR 18871)

---

### 134. Problem: Remove WSR-88D Alerting functionality from AWIPS

Alert Request Message, handling alert messages/9 and the UAM/73 product). This is expected to have no impact on Alerts from AWIPS SCAN.

**Operational Impact:** Once the alerting functionality is removed in Build 18, the corresponding AWIPS functionality will cease to work. AWIPS users should be able to do everything they do now, but they will never get any alerts or the UAM product. AWIPS users may get a PRM (no such message) upon line connection and when they commanded sending the alert message to the RPG.

**Required Behavior:** All NEXRAD Alerting functionality in AWIPS should be removed (i.e., editing alert grids, selecting categories to be alerted on, sending the Alert Request Message, handling alert messages/9 and the UAM/73 product). (DR 18800)

---

### 135. Problem: D-2D Radar NEXRAD Unit Status incorrectly reports Backup Comms status as Unknown

The ROC implemented a new alarm in WSR-88D Build 16 via CCR NA14-00072 and Build 17 via CCR NA15-00002. The alarm is reported via the GSM in half-word 40, bit 4. Currently, AWIPS reports this via the NEXRAD Unit Status Display as “RPG Alarm = Unknown 4”, but it should be reported as “Backup Comms”.

**Operational Impact:** User cannot determine what the actual status or alarm is for the NEXRAD unit.

**Required Behavior:** NEXRAD Unit Status Display shows Backup comms status as “RPG Alarm = Unknown 4”, but it should be reported as “Backup Comms”. (DR 18798)

---

### 136. Problem: Radar - remove from AWIPS those products that are obsolete in WSR-88D Build 17

The ROC is removing several products from the WSR-88D baseline in Build 17 (deployment April 2016 - June 2017). The NEXRAD CCRs and products are: NA15-00045 (3-bit Z: 16, 17, 18; 4-bit Z: 21); NA15-00048 (3-bit V: 22, 23, 24); NA15-00051 (3-bit SW: 29); NA15-00054 (3-bit CR: 35); NA15-00057 (3-bit Cross Section: 85, 86); NA15-00063 (4-bit Dual Pol: 158, 160, 162, 164). On AWIPS, these resolution options should be removed from product request GUI's and other radar product configuration files. See attached (red strikeout) for a partial depiction of what would be removed. Also, in Build 18 the following will be removed: via NA16-00078 (SRR: 55), NA16-00077 (LRA: 63, 64, 89) and NA16-00086 (CR: 36).

**Operational Impact:** User confusion may result if the no longer available products are still present in the product request GUI's and other radar product configuration files. Attempts to request these products may result in errors.

**Required Behavior:** The obsoleted products should not be present in the product request GUI's and other radar product configuration files. (DR 18797)

---

**137. Problem: HWR: Buffer limit prevents display of more than approx. 115 stations in RWR product**

Sites MFL and BTV have both reported that when trying to include more than a certain number of observations in the RWR product, approximately 115, that the product truncates and prints out a line of garbage characters like

```
C1F1M1C2F2M2C3F3C4F4M3C5F5M4C6F6M5C7F7M6C8
```

at the end.

The product is still generated and transmitted correctly when the truncation/garbage characters issue occurs.

To prevent this from occurring, it's necessary to reduce the number of observations in the product so that the buffer limit is not exceeded.

This issue dates back to AWIPS I.

The fix appears to simply involve increasing the allocated memory buffer limit.

**Operational Impact:** No impact as long as product does not exceed buffer limit. If it exceeds the buffer limit, it needs to be trimmed until it no longer exceeds the limit.

**Required Behavior:** The memory buffer limit for HWR products should be doubled to allow for longer products so that sites can generate them if desired. (DR 18774)

---

**138. Problem: GOES-R - Alaska sector navigation problem**

Navigation for the Alaska sector of GOES-R imagery is incorrect. It is zoomed out slightly compared to the Full Disk image which is correct. Toggle between the attached images to see the problem.

The site analyzed the issue and found that when the decoder was originally produced, the `latitude_of_projection_origin` and `standard_parallel` parameters in the Alaska data was swapped. This has been corrected in the data but the decoder is still expecting those parameters to be swapped.

**Operational Impact:** The GOES-R Alaska sector imagery is mis-navigated.

**Required Behavior:** GOES-R navigation for all sectors should be correct. (DR 18762)

---

**139. Problem: DD SBN data being sent to ingestGrib**

The below error was noticed on an Omaha testbed. The WMO header from the product does not match the DD exclusion pattern in `grib.xml`. Update the pattern to or in the `KNCF` entry with `KWBC`.

WMO header from file: LZAA91 KNCF 080000



**Operational Impact:** Grid ingest can fall behind due to all Data Delivery products being incorrectly routed to it.

**Required Behavior:** Route Data Delivery products to Data Delivery plugin only. (DR 18755)

---

#### 140. Problem: BOIVerify: Issue with data on which forecaster edited the grids

WFO Albuquerque site reported an issue they've been seeing with BOIVerify for about the past 3 months or so.

The issue is with the grids and who gets listed as being the forecaster editing those grids. They keep 200 days worth of grids, and are finding that whoever the forecaster was who edited a grid 200 days ago is getting their name inserted into the current grids as being the one who edited the grids... in addition to the actual forecaster who is editing the current grids.

Additional background on the issue:

Prior to installing AWIPSII, they had been running BOIVerify version 2.0.8. They had a prior version (she can't recall the exact version) which was doing a very similar thing, and when they went to 2.0.8 it wasn't a problem anymore. Also, for about the first 200 days of being AWIPSII, this issue did not occur, only after rolling past the 200-day mark did it appear, and they've been looking into the issue off and on since. It is likely the version of BOIVerify that came with A2 and that they are running presently is version 2.0.5.

Site was able to identify the change that is in version 2.0.8 to fix this issue. It is being tested at Albuquerque.

**Operational Impact:** Incorrect identification of forecaster editing grids.

**Required Behavior:** Associate the correct forecaster name/number with saved grids. (DR 18743)

---

#### 141. Problem: MPE Gage Table: satellite values are off by 1 hour compared to the display

In the MPE Gage Table, the values displayed in the Satellite Precipitation and Local Bias Satellite Precipitation are 1 hour off. When compared to the satellite data in the display, the values in the gage table are for the following hour; not the current time.

Steps to reproduce:

1. load the MPE Perspective in CAVE.
2. from the top menu, select PrecipFields-->Satellite Precip.  
Note: the same problem also occurs with Local Bias Satellite Precip.
3. from the top menu, select Gages-->Show Gage Identifiers then Gages-->Show Gage Values.



4. MB3 click-and-hold on the map display. When the pop-up menu appears, select "MPE Info" to enable the sampling readout.
5. using the '<' and '>' controls in the toolbar, move through the hours of data to locate a gage where the Satellite Precip data changes over a short number of hours. When located, rewind to the earliest hour of the series.
6. zoom-in on the test gage, then hover the mouse over it to display the value at the bottom-left of the display.
7. from the top menu, select Gages-->Gage Table.
8. enter the lid of the test gage in the "Search for LID:" field.
9. locate the Satellite Precip column for the gage: note that the value does not match the sampled display.
10. advance the display 1 hour.
11. repeat steps 7-9. Note that the Satellite Precip value in the gage table matches the sampling value for the previous hour.

See attached screen captures:

File Name	Hour	Sampled Value	Gage Table Value
SatPrecip_13z.png	13	0.00	0.01
SatPrecip_14z.png	14	0.01	0.03
SatPrecip_15z.png	15	0.03	0.03
SatPrecip_16z.png	16	0.03	0.01
SatPrecip_17z.png	17	0.01	0.00

**Operational Impact:** For users which use satellite estimates as their primary field, and they believe those estimates when QC'ing bad gages (such as bad positive reports, when snow is melting in the tipping buckets in the sun, or bad 0.00 gage reports from precipitation areas due to clogs), it slows down the gage QC because they can't use the gage table. They must revert to the "Display 7x7" edit tool, which requires many more mouse clicks and thus a lot more time. The HAS have deadlines to meet."

**Required Behavior:** The MPE Gage Table displays satellite data for the currently selected hour. (DR 18736)

---

## 142. Problem: Unable to delete user-created subset area in data delivery

It is not possible to delete a user-created subset area from within the data delivery subset manager dialog. There is currently a "delete" button below the "Saved Region Name" text field, but the region name will not be removed from the "My Regions" drop-down menu.

**Operational Impact:** Not being able to remove unwanted user-defined subset regions will make it more difficult to locate relevant datasets from the menu.

**Required Behavior:** Subset regions should be removed from the "My Regions" drop-down menu after the delete button is clicked. (DR 18735)

---

**143. Problem: RadarServer cluster installs do not share configuration data**

The AWIPS RadarServer software is installed on both dx1 and dx2 so that it can run during failover. However, the /awips2/rcm/data/config directory is unique to each host. This can lead to configuration data being out of sync. The directory should be on an NFS file system like /awips2/edex/data.

**Operational Impact:** Sites may have missing radar data during failover conditions.

**Required Behavior:** The RadarServer configuration data should be shared between cluster nodes. (DR 18728)

---

**144. Problem: Remove patched gov.noaa.nws.ncep.edex.uengine.jar**

In 16.2.1 the gov.noaa.nws.ncep.edex.uengine.jar plugin was added back into regional HQ EDEX plugin directory via 16.2.1 install scripts. Since this jar will not be tracked via rpm, it could stay on the system indefinitely, and must be manually removed once no longer needed, which should be 16.2.2, since imets should be updated to 16.2.1 by then.

**Operational Impact:** None, this plugin will not be used once iMets are updated to 16.2.1. However, if the plugin stays on the system indefinitely and there are core changes to EDEX which make this old plugin no longer compatible, then EDEX might fail to start.

**Required Behavior:** The obsolete plugin is no longer at the regional HQ (DR 18726)

---

**145. Problem: AvnFPS: AvnFPS program freezing when TAF packages autosaves**

A user at site AFC reported that when he is working in the AVNFPS program on the xt8 workstation, the AvnFPS program freezes for about five seconds when the TAF package auto saves. The user noticed that the tmp directory that the TAF's are autosaving to is ever emptied, as he can see draft TAF packages going back to February 2015. He suspects that the directory filling up may be causing the problem. Another thing is that the site AFC has a long list of TAF stations so it may take some time to auto save (?). The problem is noticed by many other users at AFC on most of the workstations (XT and LX), and it slows the users down when creating a TAF package. Disabling the autosave as a temporary workaround does solve the problem, but this is not a permanent solution as a TAF package is a very time intensive process for the users and it's very important that Auto Save works in case of system crashes.

**Operational Impact:** The problem slows users when they edit TAFs with Auto Save turned on.

**Required Behavior:** Auto Save should not cause freezing of the software (DR 18653)

---

#### 146. Problem: Radar: OTR elevation list active radars unsorted and contains duplicates

The OTR GUI uses the list of angles from the last received GSM if the RPG is currently connected. Otherwise, it uses list of angles from the elevation lists files. For the case where the RPG is connected, sometimes the list of elevations for radars will not be sorted and cleared of duplicate entries. The following results came from testing:

15.1.1 koun Dedicated - unsorted, dups present

15.1.1 tbwi Dedicated - sorted, no dups

15.1.1 koun Dial - sorted, no dups

15.1.1 tbwi Dial - sorted, no dups

16.1.1 koun Dedicated - unsorted, dups present

16.1.1 tbwi Dedicated - sorted, no dups

16.1.1 koun Dial - sorted, no dups

16.1.1 tbwi Dial - sorted, no dups

16.2.1 koun Dedicated - unsorted, dups present

16.2.1 tbwi Dedicated - unsorted, dups present

16.2.1 koun Dial - sorted, no dups

16.2.1 tbwi Dial - sorted, no dups

Additional investigation shows the problem occurs when live elevation angles are read in.

Suggested fix - add the below block around line 1895 of  
com.raytheon.uf.viz.radarapps.core.BaseRadarProductUI.setRadar:

```
// Remove duplicates and sort
    HashSet<Integer> set = new HashSet<Integer>(liveElevationAngles.length);
    for (int e : liveElevationAngles)
        set.add(e);
liveElevationAngles = new int[set.size()];
    int i = 0;
    for (int e : set)
        liveElevationAngles[i++] = e;
    Arrays.sort(liveElevationAngles);
```

**Operational Impact:** User confusion when selecting OTR elevation options.

**Required Behavior:** Elevations lists in OTR should be sorted and duplicates should be removed. (DR 18622)

---

#### 147. Problem: GFE: Error in SAF Formatter Overrides causes incorrect end of line period

Site SGX reported the following issue:

When there is a headline in effect, and its text takes up more than one line, a period is being inserted at the end of the first line, rather than the text simply wrapping along to the next line. This causes an awkward pause mid-sentence in the weather radio broadcast as the headline is translated into voice.

Example product:

Now for the official National Weather Service forecast for San Bernardino and Riverside County Valleys-The Inland Empire

WIND ADVISORY IN EFFECT FROM 4 PM SUNDAY TO 6 PM PST MONDAY.

HIGH WIND WARNING IN EFFECT FROM 6 PM SUNDAY TO 6 PM PST.

<<<<<<&lt;Should not be a period here, headline sentence should continue to next line.  
MONDAY.

Today, Partly cloudy. Patchy fog in the morning. Local visibility one quarter mile or less at times in the morning. Highs 64 to 69. Light winds becoming southwest 15 mph in the afternoon.

.....

Jonathan Lamb at site CHS offered the following solution:

The following lines which appear in the preProcessArea within the Baseline SAF\_Overrides formatter are probably causing the problem:

1.Add punctuation to end of each line  
headlines = headlines.replace("\n", ".\n")

This line seems to be how they're adding the period after each headline so it gives the necessary pause. I've attached a possible workaround. You'd replace preProcessArea with the contents of this patch. In theory it should only add the period at the end of each headline and not at the end of each newline.

**Operational Impact:** None to forecasters. However products that play on the weather radio may have awkward mid-sentence pause.

**Required Behavior:** Mid-sentence period should not occur in headlines of SAF. **(DR 18594)**

---

#### 148. Problem: CWSU ThinClient: Implement functionality to prevent /home directory filling up over time.

Site reported seeing a recurring issue with the /home directory on the (thin client) box. About every 3-4 weeks, the directory fills up, preventing users from logging in. Each time, it's /home/<users>/caveData/cache/wxdata which fills the directory. After clearing that directory out for all the users, it's fine until it happens again.

**Operational Impact:** Without an automatic cleanup of the directory the users are unable to log in preventing them from doing any kind of operational work.

**Required Behavior:** The clearing of the directory should be made on some sort of regular basis without users having to manually do it. (DR 18587)

#### 149. Problem: Himawari-8 satellite products have shifted to the northeast

ACR site reported that AWIPS is currently displaying the Himawari-8 shifted to the northeast. Attached is an image showing the displacement (compare the coast line).

Steps to duplicate:

1) Load Ash 11-12 BTW from Satellite --->> Himawari --->> Himawari Derived

**Operational Impact:** Imagery is not useful because it is displaced from its proper position.

**Required Behavior:** Imagery should display/lining up correctly on the projection. (DR 18567)

#### 150. Problem: TextWS: Can not edit WRK products in text window that have a ZCZC header but no empty following line.

Work products that have the "ZCZC" style header, but do not have true empty line (i.e. no extra white space) after the header will fail to open in the text window editor. No error message is displayed, but it is logged:

```
ERROR 2016-01-21 16:38:22,641 [main] CaveLogger: Unhandled event loop exception
java.lang.StringIndexOutOfBoundsException: String index out of range: -1
    at java.lang.String.substring(String.java:1911)
    at com.raytheon.viz.texteditor.dialogs.TextEditorDialog.setCurrentHeaderAndBody(TextEditorDialog.java:5862)
    at com.raytheon.viz.texteditor.dialogs.TextEditorDialog.enterEditor(TextEditorDialog.java:4189)
    at com.raytheon.viz.texteditor.dialogs.TextEditorDialog.access$26(TextEditorDialog.java:4168)
    at com.raytheon.viz.texteditor.dialogs.TextEditorDialog$65.widgetSelected(TextEditorDialog.java:3112)
    at org.eclipse.swt.widgets.TypedListener.handleEvent(TypedListener.java:248)
...
```

**Operational Impact:** Forecasts could be delayed

**Required Behavior:** Any text stored in the Text Database should be loaded and the Edit Header GUI should appear empty if the ZCZC Header is unknown (DR 18547)

#### 151. Problem: Issue with "Populate\_SkyTool" base line smart tool

BCQ site reported the following issue:

Summary: The baseline GFE smart tool "Populate\_SkyTool" has an error that causes it to fail.

If the user selects "Yes" for the "Use RH w.r.t. ICE @ T < -25C?" option, an array index error is thrown and the tool does not complete.

**Operational Impact:** The tool is not usable when the option "Use RH w.r.t ICE @ T < -25C is chosen.

**Required Behavior:** The "Populate\_SkyTool smart tool should work without throwing an error when any of the tool options are selected. (DR 18542)

---

### 152. Problem: EDEX Purger: The selectedRetentionHours tag in the RAW\_DATA.xml and PROCESSED\_DATA.xml are not being honored

The selectedRetentionHours tags in both XML files are not being honored. The purge occurs according to the rule set by defaultRetentionHours and not the nested selectedRetentionHours. this behavior was confirmed on TBDW where defaultRetentionHours was set to 24 and the selectedRetentionHours for categories in this example manual/grib was set to 168:

```
<defaultRetentionHours>24</defaultRetentionHours>
<category>
  <name>Local</name>
  <selectedRetentionHours>168</selectedRetentionHours>
  <dataSet>
    <dirPattern>(manual)/grib/(\d{4})(\d{2})(\d{2})/(\d{2})/(mpe)</dirPattern>
    <filePattern>(ZETA98_)[A-Z].*(\d{4})(\d{2})(\d{2})(\d{2})(\d{2})z.*</filePattern>
    <timeType>Date</timeType>
    <displayLabel>{1}-HPE/BiasHPE</displayLabel>
    <dateGroupIndices>2,3,4,5</dateGroupIndices>
  </dataSet>
```

In the reality the purging was done to preserve the 24 hours of data - see the attached two images.

**Operational Impact:** The incorrect purging of raw data could lead to disk space problems which could impact the operations by preventing new data from ingesting. However, NCF does monitor disk space.

**Required Behavior:** In the absence of selectedRetentionHours tag the purging should occur according to the rule set in the defaultRetentionHours. However, when the selectedRetentionHours is present for a dataType - the purging should be done according to the rule specified in that tag. (DR 18517)

---

**153. Problem: Crest History checkboxes get checked when new crests added**

When creating new crests using the Crest History GUI in HydroBase, upon re-opening the window for the same location, all of the check boxes will be checked for the crest just added, even if the user did not check them. The user must then un-check them and click Apply. If adding multiple crests for the same location, it seems to happen only for the last one entered before closing the window.

**Operational Impact:** Boxes will be checked indicating "Based on old datum, observed by high water mark, suppress printed display, affected by ice jam" attributes which are not intended and are misleading. The user must re-open and correct crests added for each location. Not knowing the workaround may result in historical crests not showing up on the web page.

**Required Behavior:** Only boxes manually checked by the user should be saved when new crests are created through the GUI. (DR 18507)

---

**154. Problem: TextWS: No space at the end of lines makes wrapping not work in some cases.**

If the user wants to insert a word at the end of a line and hits a space - the space does not appear, so to insert a word the user needs to keep typing, wait for the wrapping to occur and insert the space between the two words that got wrapped to the next line.

**Operational Impact:** The products still can be edited with the text wrapped properly, but the defect adds the necessity to add a space manually when it should be done automatically.

**Required Behavior:** You should be able to append a new word to the end of a line. (DR 18438)

---

**155. Problem: ArealQpeGenSrv is not working**

The generate\_areal\_qpe process is not working. The process ingests QPE grids from the RFCs and produces WFO-level mosaics.

There is an error in the edex-ingest-ohd-20150811.log file.

Error from the log:

```
Additional information about the issue -> INFO 2015-08-11 00:25:00,018
[qpeGenScheduledWork-1] ArealQpeGenSrv: EDEX - Started
process_qpe_mosaic at Tue Aug 11
00:25:00 GMT 2015
INFO 2015-08-11 00:25:00,019 [mpeFieldGenScheduledWork-1]
MpeFieldGenSrv: EDEX - Executing
MPE FieldGen with argument: 3
ERROR 2015-08-11 00:25:00,245 [qpeGenScheduledWork-1]
ArealQpeGenSrv: EDEX - Error creating
rfc qpe grid
com.raytheon.uf.common.datastorage.StorageException: Error
processing RetrieveRequest on
file /awips2/edex/data/hdf5/grid/QPE-KRF/SFC/QPE-KRF-2015-08-10-23-FH-001.h5:
Traceback
```



```

(most recent call last):
File "/awips2/python/lib/python2.7/site-packages/pypies/handlers.py",
line 90, in
pypies_response
resp = datastoreMap[clz][0](obj)
File "/awips2/python/lib/python2.7/site-packages/pypies/impl/H5pyDataStore.py",
line
359, in retrieve
ds = self.__getNode(rootNode, group, request.getDataset())
File "/awips2/python/lib/python2.7/site-packages/pypies/impl/H5pyDataStore.py",
line
705, in __getNode
node = self._getGroup(rootNode, group)
File "/awips2/python/lib/python2.7/site-packages/pypies/impl/H5pyDataStore.py",
line
727, in __getGroup
raise StorageException("No group " + name + " found")
StorageException: No group Data found
at
com.raytheon.uf.common.pypies.PyPiesDataStore.sendRequest(PyPiesDataStore.java:380)
~[com.raytheon.uf.common.pypies.jar:na]
at
com.raytheon.uf.common.pypies.PyPiesDataStore.sendRequest(PyPiesDataStore.java:354)
~[com.raytheon.uf.common.pypies.jar:na]
at
com.raytheon.uf.common.pypies.PyPiesDataStore.cachedRequest(PyPiesDataStore.java:422)
~[com.raytheon.uf.common.pypies.jar:na]
at com.raytheon.uf.common.pypies.PyPiesDataStore.retrieve(PyPiesDataStore.java:227)
~[com.raytheon.uf.common.pypies.jar:na]
at com.raytheon.uf.edex.ohd.pproc.ArealQpeGenSrv.getData(ArealQpeGenSrv.java:679)
[com.raytheon.uf.edex.ohd.jar:na]
at
com.raytheon.uf.edex.ohd.pproc.ArealQpeGenSrv.processSingleQpe(ArealQpeGenSrv.java:533)
[com.raytheon.uf.edex.ohd.jar:na]
at
com.raytheon.uf.edex.ohd.pproc.ArealQpeGenSrv.processArealQpe(ArealQpeGenSrv.java:237)
[com.raytheon.uf.edex.ohd.jar:na]
at sun.reflect.GeneratedMethodAccessor1013.invoke(Unknown
Source) ~[na:na]
at
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)

```

**Operational Impact:** No RFC QPE data for MPE and SSHP

**Required Behavior:** arealqpegensrv should retrieve the grib records and create RFC qpe files (DR 18409)

---

## 156. Problem: MPE: Daily QC: error when trying to run from the top menu

Steps to reproduce:

1. load the MPE perspective in CAVE.
2. in the Choose Data Period window, note that the default settings for the Daily QC

are: Ending Hydrologic Date=<current date> and Number Days=10 (this value is adjustable in the Apps\_defaults file).

3. click 'Display MPE Data'.

4. from the top menu, select Gages-->QC Precipitation.

Expected result: the Daily QC is loaded, using the same end data and number of days displayed in the Choose Data Period Window.

Actual result: Daily QC does not load, and AlertViz displays an error (see attached text file).

**Operational Impact:** Users are unable to run the Daily QC by selecting it from the top menu.

**Required Behavior:** When selected from the top menu, the Daily QC is loaded using the same end data and number of days displayed in the Choose Data Period Window. (DR 18376)

---

### 157. Problem: TextWS: Automatic filling out of AWIPS Header Block GUI fields problem.

At GUM the FLS product has AFOS PIL of GUMFLSMY. When an FLS scratch product gets loaded in the Text Workstation Text Editor window, the corresponding AWIPS Header Block GUI pops up with the pre-filled values of GUM, FLS, GUM for WSFO ID, Product Category and Product Designator text boxes respectively instead of GUM, FLS, MY resulting in TTAAii and CCCC fields to be blank.

HFO was testing WarnGen in GUM back up mode.

**Operational Impact:** If the user does not use the suggested work around and tries to issue a product, the generated empty WMO header will prevent the user from issuing and sending out the product.

**Required Behavior:** The AWIPS Header Block GUI text fields need to be filled out with appropriate values. (DR 18365)

---

### 158. Problem: AvnFPS Text Editor hardcoded background color for discrepancy check

Fred Pierce from BUF called regarding the AvnFPS Text Editor hardcoded background color for any QC check results. It's hard for users that are color blind to read the text behind the default red color ground even when text font/color are changed. They would like to have a user defined background color for QC check results.

**Operational Impact:** Default red background for QC check discrepancies makes text hard to read for color blind users.

**Required Behavior:** Add a customized background color for QC check results in user settings in AvnFPS. (DR 18352)

---

**159. Problem: BiasCorr\_all.sh script error**

Angel Montanez from LIX reported that many processes are running on BiasCorr\_all.sh via cron, and these processes are re-initialized every few minutes. The CPU usage is quite high on px2.

There is a bug in BiasCorr\_All.sh. On line 91:

```
test=`ps -ef | grep "BOIVerifyBiasCorr" | grep -v grep | grep "-site $SITEID"| wc -l`
```

"-site" will be interpreted as "-s -i -t -e" which is invalid. The solution is to add -- before that make the line as:

```
test=`ps -ef | grep "BOIVerifyBiasCorr" | grep -v grep | grep -- "-site $SITEID"| wc -l`
```

**Operational Impact:** Many processes are running on BiasCorr\_all.sh via cron and re-initialized every few minutes. The CPU usage is quite high and workstations get slow.

**Required Behavior:** BiasCorr\_all.sh should only run in one process. (DR 18346)

---

**160. Problem: EDEX Fails to Handle End-of-month Metars**

OAX was ingesting the following metar on 2015-09-01 00:00Z (010000 in the header):

```
SAUS70 KWBC 010000 RRXMETAR
```

```
KMLE 312355Z AUTO 13005KT 10SM CLR 28/21 A2989 RMK AO2 T02800211
```

```
10297 20276=
```

with the obs time of 2015-08-31 23:25Z (312355Z). EDEX interpreted the obstime as 2015-09-31 23:55Z instead of 2015-08-31 23:55Z and rejected the data because it is 44635 minutes in the future.

**Operational Impact:** End-of-month metar data is being incorrectly rejected

**Required Behavior:** Decode the end-of-month metar data instead of rejecting it. (DR 18253)

---

**161. Problem: Bug in BOIVerifyUtility getStatModelCases method**

In getStatModelCases method in BOIVerifyUtility.py, line 2961-2962 in 14.4.2-5 (line numbers vary in different OBs):

```
if self.fncBtime[rec] not in baselist:
```

```
    baselist.append(self.sncBtime[rec])
```

should be

```
if self.sncBtime[rec] not in baselist:
```

```
baselist.append(self.sncBtime[rec]])
```

This is clearly a typo.

**Operational Impact:** PoP/QPF call to getStatModelCases method in BOIVerifyUtility.py will fail since fncBtime is not set.

This results in end of year stats for PoP/QPF to not be generated. The problem does not affect MaxT/MinT end of year stats however, just PoP/QPF.

The problem only affects end of year stats.

**Required Behavior:** All calls to getStatModelCases method in BOIVerifyUtility.py should run without errors. **(DR 18169)**

### 162. Problem: Warngen: portion of zone incorrect if zone table has two records for same zone

For some zones, there are two records in zone table, one for land area and the other for water area. The coordinates (lat/lon) for land and for water are different. While computing the portion of the hatched area, if the coordinate for water area is used, it would result in incorrect portion. TBW found the incorrect portion for Pinellas in its SPS product. Testing shows same issue can occur for county based product as well, as such SVR for Stafford County at LWX.

See attached screenshots for details.

-----Updated by Kevin Woodworth on 11/5/2015-----

The same root fix for DR #18027 should address both DR #18027 and this DR - therefore they need to be tested at the same time the fix is ready.

**Operational Impact:** Products can be created with confusing references to portions of a county that could cause forecasters to need to hand edit the product.

**Required Behavior:** The portion of zone/county should be correct. **(DR 18159)**

### 163. Problem: GFE Text Products showing in GMT rather than MST

Phoenix WFO reported that after OB 14.4.1 was installed, all GFE text products generated headers with time zones erroneously in GMT. This has affected or will affect all WFOs that serve AZ (and don't observe DST): Phoenix, Tucson, Flagstaff and Las Vegas. A workaround was discovered by Evelyn Bersack (ITO Tucson) which entails simply changing the time zones in the AreaDictionary Utility from 'MST7' to 'MST' at the SITE level.

Analysis: The text formatters were able to use the "MST7" timezone designation and correctly generated the issuance time in the "MST" timezone. The product editor, which updates the times every minute, does not recognize the "MST7" designation and formatted the time in GMT instead. The issue surfaced as a result of the fix under DR14946. Note the issuance time in the

product header is correctly formatted in the "MST" timezone, as it is using the office timezone, which is "US/Arizona." Only the issuance time in the segment headers is shown in GMT.

Additional comments from Ron Anderson:

The shapefile contains single characters which createAreaDictionary.py translates into actual time zones for GFE. That's why we had to patch createAreaDictionary.py.

There's no telling what other code might be looking at the shape file so changing it to use real time zone identifiers would be risky. If we were to move in that direction we would probably want to add a new attribute for the full time zone id and deprecate, but leave the existing one in place until everyone has time to update their applications to use the new attribute.

**Operational Impact:** Text products would have the issuance time shown in GMT in the segments, instead of MST. Forecaster would have to manually edit the product before sending.

**Required Behavior:** Issuance time be shown in the correct timezone of the zones of each segment. (DR 18114)

---

#### 164. Problem: No way to select TDWR elevations below 0.5 in RMR GUI

PBZ site reported that attempts to request the 0.1 degree 8bit Z from TCMH and the 0.2 degree 8bit Z from TLVE, but the OTR and RMR GUIs only have 0.5 degrees and above.

Duplicated on WNCF and NHDA.

Test steps:

Txxx - Radar Applications - Radar Multiple Request... - click on New Request - select Txxx -- select Elevations(s) from drop down menu.

Additional information from Mike Istok:

1) Below and attached shows what AWIPS-1 actually does. This problem may affect other elevation angles.

2) This problem probably also impact RMR's to the one NEXRAD (KLGX) that scans lower than 0.5 degrees.

OTR works and has the 0.3, but RMR only provides down to 0.5. Also, the choice of elevation angles is the same for both WSR-88D and TDWR (i.e., 0.5 to 19.5 with all the possible different angles used by WSR-88D VCPs). Whereas, on AWIPS-1 (see attached), the TDWR angles are from 0.1 to 60.0 degrees with all the different angles used at all the different sites.

Additional notes from testing on OB16.1.1:

Attached A1 code for elev-lists.tcl which handles building lists of elevations used by OTR and RMR. When A1 builds these lists for RMR, it calls load\_elev\_lists, then select\_elev\_list "RMR"; for OTR, it calls load\_elev\_lists, then select\_elev\_list "OTR".

RMR has the the following problems:

Problem 1: `com.raytheon.rcm.lib.ElevationInfo` constructor calls `Loader.loadElevationInfo(fs, staticInfo, vcpInfo)` to populate a `HashMap staticInfo` with keys of `radarID/vcp`, and values of elevations. `loadElevationInfo` reads `elevationLists.txt` one line at a time, and populates the list based on the info read in. Firstly, it only processes the OTR entry from the list, and ignores the others, so the only elevation list that can be sent back to the RMR menu is one that is in the OTR line of `elevationLists.txt`. The note indicates that RMR is the same as OTR (perhaps this is typical config, but A1 recognizes the difference). The note about TDWR is simply incorrect where RMR is concerned. A1 treats these uniquely such that RMR list is used for RMR, RMR-TDWR list is used for radar type TDWR. This implies that `staticInfo` needs to key them differently to ensure that they are added to the list for retrieval to the RMR menus, or alternately, only save off the appropriate line of elevations to match the request.

Problem 2: Elevation lists are set in code when `com.raytheon.uf.viz.radarapps.core.BaseRadarProductUI.getElevationAngles()` is called. It calls `ElevationInfo.getInstance().getUniqueElevations(radarID, vcp)`. At this point, `vcp` is defaulted to `-1`, and used as a key to retrieve the elevation list from the `HashMap staticInfo`. A change needs to be made to uniquely retrieve elevations from `staticInfo` based on whether RMR/OTR are in use and radar type.

NOTE: the attachment `.dat` file is in `.tgz` format and contains the fixes.

**Operational Impact:** Sites cannot view the lowest elevation (if it is below 0.5) of 8bit Z data from neighboring TDWR radars, which is useful in their own warning operations as well as warning operations while backing up neighboring offices.

**Required Behavior:** Should be able to request the 0.1 degree 8bit Z from TCMH and the 0.2 degree 8bit Z from TLVE using the OTR and RMR GUIs. (DR 17885)

---

## 165. Problem: Error in NEXRAD Unit Status with MESO-SAILS

DDC site reported that the GSM shows all of the available elevation slices and whether or not Super Res is available for them correctly. However, when that GSM is translated into the NEXRAD Unit Status in AWIPS, it is showing that SuperRes is available in elevations for which SuperRes is actually not available.

The NEXRAD Unit Status that shows SR is available for 5.1 and 15.6 degree slices, but the GSM shows that this is where the additional two MESO-SAILS slices are and it correctly shows 0.5 SAILS cut in between the 4.00 and 5.10 slices and in between the 8.00 and 10.00 slices.

See attached images.

**Operational Impact:** Forecasters may miss important radar data (SuperRes tag on the 5.1 and 15.6 slices instead of inserting the 0.5 degree SAILS cuts and marking those as SuperRes)

**Required Behavior:** SuperRes tags shall be removed for any instances where they are being set incorrectly. (DR 17748)

---

**166. Problem: Lifted index issue reporting in units of Kelvin but labeled as Celsius**

RNK site reported that the Lifted Index parameter displayed from the GFS20, NAM20, NAM40 and NAM80 are displayed in D2D as Kelvin instead of degrees Celsius, although the product legend in the bottom right of D2D says the units are degrees Celsius, but the values on the map are 280+, which is Kelvin, not Centigrade. Most varieties and for most models appear to still be correctly in values of C (i.e NAM12).

Duplicated on WNFC:

- 1.0) CAVE - VB - plain view
- 2.0) NAM20, NAM40, NAM80 from Source
  - 2.1) Lifted Idx, BL Parcel LI and Best (4 layer) LI from Fields - Sfc/2D - Convective
  - 2.2) BL from Planes
- 3.0) Load both imaging and contour
  - 3.1) Try to it sampling...

**Operational Impact:** Incorrect value/unit labels create confusion for the forecaster and possible misinterpretation of the product display.

**Required Behavior:** Lifted Idx, BL Parcel LI and Best (4 layer) LI units should be labeled as C in product list, legends, and sample text (DR 17642)

---

**167. Problem: NAM12 Thunderstorm Probability (Tstorm Prob) displays only 0 HR forecast**

LOX site reported that thunderstorm Probability field for the NAM12 via the Volume Browser:

NAM12, under the Fields section -Sfc/2D -> Tstorm Prob.

(Or in 15.1.1 and later: Misc -> Tstorm Prob)

The resulting product that loads only shows the 0 hour forecast - does not show the full run's worth of data, no matter what the frame count's set to.

Problem reproduced on WNCF (14.3.3) and TBDW (15.1.1).

**Operational Impact:** Forecasters who routinely use the NAM12 for determining thunderstorm chances would have to resort to other tools/graphics to replace the missing graphic.

**Required Behavior:** A2 should display the NAM12 Tstorm Prob for the full run of forecasts, out to 84 HR. (DR 17507)



---

**168. Problem: chps\_backup\_weekly failing to run**

The chps\_backup\_weekly script is failing to archive data to tape at RFCs. There are two issues with the script.

First, the method by which the tape is being detected is not flexible. It assumes the tape is the scsi device at 2:0:4:0. It looks as though the tape is actually at either 3:0:4:0 or 5:0:4:0. The method used in nas\_backup\_weekly should be used (using the ID of 4 instead of 3).

Second, even if that is fixed, the script will still fail to backup the directories listed because those volumes may not be mounted on the ax. Again, the method used in nas\_backup\_weekly to temporarily mount the volumes should be used to access the data to backup to tape. (After review and discussion, this part of the DR does not need to be fixed, as the directories listed in the chps\_backup\_weekly script do appear to be mounted)

**Operational Impact:** None, though in the event of a catastrophic failure of the NAS, this site specific data would not be available to be restored, could cause impact in getting the site operational again.

**Required Behavior:** Specified directories in chps\_weekly\_backup are backed up to tape successfully. (DR 17470)

---

**169. Problem: AvnFPS: Problem with syntax checking**

Syntax checking fails to detect a syntax error when a group (an FM group or a TEMPO group) containing the error is put in the same line with another group.

That is, when two groups (for example, one FM group and one TEMPO group or two FM groups) are put in one line and one of the groups contains an error, syntax checking is unable to detect the error and gives an unhandled event loop exception.

**Operational Impact:** It could be possible for a TAF to go out with bad syntax. The forecaster would have to manually review the product before it goes out.

**Required Behavior:** The syntax checking should be to detect this type of typos (DR 17453)

---

**170. Problem: Local (LDAD) obs are not displaying precip data during rain events**

In D2D go to Obs->Local Data-> 1 hr precip plot (or any other precip plot, none work)

Data is coming in as it shows current time stamp, but no data (not even stations) are displaying. When leave it up, it throws an alertviz error:

An internal error occurred during: "Requesting Plot Data..."  
java.lang.ClassCastException:  
com.raytheon.uf.common.derivparam.library.DerivParamConstantField cannot be cast to  
com.raytheon.uf.common.derivparam.library.DerivParamField

at com.raytheon.viz.pointdata.util.PointAccumRequestableData.<init>(PointAccumRequestableData.java:77)

at com.raytheon.viz.pointdata.util.PointAccumLevelNode.getData(PointAccumLevelNode.java:106)

```

at com.raytheon.uf.common.derivparam.inv.MetadataContainer.getData(MetadataContainer.java:149)
at com.raytheon.uf.common.derivparam.inv.MetadataContainer.getData(MetadataContainer.java:147)
at com.raytheon.uf.common.derivparam.inv.MetadataContainer.getData(MetadataContainer.java:110)
at com.raytheon.viz.pointdata.util.PointDataCubeAdapter.getPoints(PointDataCubeAdapter.java:157)
at com.raytheon.viz.pointdata.util.PointDataCubeAdapter.getPoints(PointDataCubeAdapter.java:114)
at com.raytheon.uf.viz.datacube.DataCubeContainer.getPointData(DataCubeContainer.java:168)
at com.raytheon.uf.viz.datacube.DataCubeContainer.getPointData(DataCubeContainer.java:176)
at com.raytheon.viz.pointdata.thread.PlotModelDataRequestJob.requestData(PlotModelDataRequestJob.java:256)
at com.raytheon.viz.pointdata.thread.PlotModelDataRequestJob.run(PlotModelDataRequestJob.java:131)
at org.eclipse.core.internal.jobs.Worker.run(Worker.java:54)

```

The error message sometimes pops up, but not always. It was seen for the 30 min precip while testing this on TBDR, but not for others.

**Operational Impact:** Forecasters will not have access to precip plot.

**Required Behavior:** Users should be able to call up Obs->Local Data-> 1 hr precip plot (or any other precip plot) and No errors should be thrown when loading products. **(DR 17411)**

### 171. Problem: AvnFPS: "Save As" function not working properly

Currently, the "Save As..." interface of the TAF editor GUI only allows a user to save content of the editor to ~caveData/etc/site/XXX/aviation/tmp/; it should allow a user to select any directory to save the content of the editor.

**Operational Impact:** None, except if site prefers saving to different location, takes some additional time.

**Required Behavior:** It should allow a user to select any place to save the content of the TAF(s) **(DR 17295)**

### 172. Problem: GFE: Problem with rsyncGridsToCWF\_client.sh (rsyncGridsToCWF.sh) script

A user reported a problem with rsyncGridsToCWF\_client.sh script, which calls rsyncGridsToCWF.sh script; the problem occurs at line 336 of rsyncGridsToCWF.sh

```

335 # if directory to write to is not on local rsync server, create it. DR 16464
336 if [ ! ssh ${locServer} 'ls "${locDirectory}" >/dev/null' ] ;then
337 ssh ${locServer} mkdir ${locDirectory}
338 fi

```

339

Testing shows that changing the line 336 to

```
336 if ! ssh ${locServer} 'ls "${locDirectory}" >/dev/null' ;then
```

solves the problem.

**Operational Impact:** None other than ignoring the error message in the script output.

**Required Behavior:** The script should run without any error and a user should not need to do anything with the code of the script (DR 17213)

---

### 173. Problem: Loss of pan and zoom features in main D2D panel when NWS Collaboration

When a user is in NWS Collaboration, if the user "floats" the Collaboration tab, clicks on the main D2D display, and then brings the Collaboration tab back to the foreground, the "Pan and zoom" button becomes disabled. The workaround is to simply click the button to restore functionality.

**Operational Impact:** Could slow down the user as they would potentially not notice that this functionality had been disabled.

**Required Behavior:** Functionality should not be disabled during use, unless user initiates it. (DR 16940)

---

### 174. Problem: WAN backup products are not ingested

Products received over the WAN backup interface are not ingested correctly.

The products were received by the testbed using MHS with message code 77.

As per the receive action handler for A2 sites, code 77 messages are stored into /data\_store/mhs\_wanbu. qpidNotify is called to process the products and send them to EDEX. However, qpidNotify is unable to find the WMO heading in the products (which have a CCB header) and as a result, they are not routed correctly within EDEX:

```
WARN 2014-10-01 18:30:25,882 [external.dropbox-2] RouteFailedLog: ^L^ARUKWBC^B
```

```
WARN 2014-10-01 18:30:25,882 [external.dropbox-3] RouteFailedLog: ^L^ARUKWBC^B
```

**Operational Impact:** Sites may not be able to get products when in WAN backup

**Required Behavior:** Products received over the WAN backup interface should store correctly (DR 16834)

---

**175. Problem: GFE: Weather Element cannot be created with WFO type "NC" in its name**

National Hurricane Center reported that there is a problem when creating a weather element in GFE on both the NHCN and NHCR systems. The problem is that GFE is picking up an office type in the name of elements. The example Shannon gave me is the element INCSurge (for an incremental storm surge parameter). GFE is picking up that 'nc' as being for a 'national center' and therefore isn't accepting the name of the weather element as valid.

Raytheon Omaha investigated and found the problem. It appears to also be in A1. The following lines in doConfig.py (config.py in A1) are causing the issue:

```
#don't add parms with your own office type in the name.

if name.find(officeType) != -1:

return None #skip this one
```

This will cause any parm containing your officeType to be discarded. I think it needs to check if name.endswith(officeType) instead.

**Operational Impact:** National centers are not able to create new weather element types with NC in the name.

**Required Behavior:** Must be able to create a weather element type with WFO type NC in the name. (DR 15633)

---

**176. Problem: RDUWRKLCO is being sent to the shefdeocder but not making to the database**

The RDUWRKLCO is being sent to the shefdeocder but not making it to the hydro database. No errors in the logs or anywhere else. This product gets created on ldad via a COCORAHS formatter. It then comes into awips via /data/Incoming and brought over through a work product. That product has a trigger on it and sends to /awips2/edex/data/manual on dx3/4, then gets ingested by shefDecoder. Should be in hydrodatabase. This has not worked since going over to A2. \*\*\*\*\*Note from the TRG: Not just for COCORAHS data, the shef decoder needs to handle any data coming in this way that is longer than 10 characters.

**Operational Impact:** N/A

**Required Behavior:** -The COCORAHS file is an internal file that is not sent through the general ingest (LDM--EDEX) so the lack of a WMO ID is not a problem when the product is sent to the shefdecode/input end point- The data needs to post in the IHFS database, but it is not because the entire COCORAHS line is used as the product ID. This string is too long for the product\_id columns in the IHFS tables, and the entire insert fails because of this. The AWIPS1 shef deocder would truncate any product ID string down to the number of characters allowed in the product\_id column. (DR 15543)

---

**177. Problem: Multiple LAPS fields not created properly**

BOU site reported that LAPS sky cover is working reasonably well now (OB13.5.3). Hydrometeor concentrations are still not available. 1500 m pressure is still broken. This is supposed to be a reduced pressure similar to MSL, just reduced to z=1500 m instead of z=0 m. It is not computed correctly in A2; instead of a reduced pressure it appears to plot the pressure 1500 m above the terrain and thus is simply a picture of the terrain. (Originally reported Mar 2012/OB12.2.1. DR written at request of B Azeem, from 12 Mar Trouble Ticket meeting.)

**Operational Impact:** Reduced quality detailed local situational awareness.

**Required Behavior:** Match/mimic A-I behavior (DR 14895)

---

**178. Problem: CCFP products not displaying when no convection is forecast**

AWCN reported that this product normally has polygons associated with it, but when no convection is forecasted, there are no polygons. When there are no polygons, the system does not know how to properly depict the situation when no convection is forecast, thus no product is produced.

**Operational Impact:** The product green times indicate that a newer product is available, but if there is no convection in the product issued, the display not updating could mislead a forecaster - making them think a product was not processed.

**Required Behavior:** Should match AWIPS 1 (DR 14857)

---

**179. Problem: GFE: Spell checker does not replace all the selected words in GFE**

The GFE spell checker for "replace all" option is not working properly. When using a spell checker in GFE formatter and trying to use the "replace all" option, it isn't replacing all the words (e.g., GEORGIA) in GFE formatter or product editor (TT# SLC 605291).

**Operational Impact:** N/A

**Required Behavior:** When "replace all" option was used in GFE spell checker, the selected word should be replaced for all words (e.g., GEORGIA) in the GFE formatter or product editor. (DR 14758)

---

**180. Problem: Text products with FOUS12 KWNO header not stored with expected AFOS PII**

BOU site reported that ingested text products with a WMO heading of "FOUS12 KWNO" do not store with AFOS PIL used in A1. In A1, they stored as {site CCC}{product NNN}{product XXX}. In A2 they store as NOAFOSPIL.

**Operational Impact:** FOUS12 KWNO are not stored with correct entries in the database

**Required Behavior:** FOUS12 KWNO products should store the same way in A2 as in A1. (DR 14687)

---

**181. Problem: LSR: Update script for copying spotters list for 64-bit workstations**

When the user updates the LSR spotters list from the LSR GUI an error message is displayed that says "Could not update spotters.nc files!". When the spotters list is updated a rehost script is called to copy the file from /data/fxa/nationalData/spotters.dat to /awips2/edex/data/utility/cave\_static/configured/BOX/basemaps/adaptivePlots/spotters.dat. This script is failing with this error: ./AWIPS2-updateLSRspotters.sh: line 10: /etc/profile.d/awips2Python64.sh: No such file or directory There isn't a separate file called awips2python64.sh. This rehosted script needs to be fixed in order for it to work.

**Operational Impact:** If a site tries to use the LSR GUI to modify spotter data they will get an error and may spend time reporting it or tracking it down before they discover the workaround.

**Required Behavior:** The user should be able to add, delete and modify spotters using the LSR GUI. (DR 14622)

---

**182. Problem: D-2D: map background blinks or appears and disappears with zooming**

BOU site reported that in D-2D, parts of a map background may either flicker or blink spontaneously. Zooming may cause parts of the map to appear and disappear unexpectedly (i.e., not part of progressive disclosure.) One known way to trigger this condition is to zoom in and out rapidly on a loading 4-panel product. (This can also cause a panel to lose spatial synchronization with other panels. To reproduce: (It may take several attempts to get the flickering to occur.) 1. Load a four-panel product. (It may help to tear off the menu first.) 2. Immediately start zooming in and out on the top-left panel by using the scroll wheel on the mouse.

**Operational Impact:** Difficult for site to map

**Required Behavior:** Map background should not flicker/blink. (DR 14493)

---

**183. Problem: GFE: Extrapolate Procedure in GFE moving grids in wrong direction**

The baseline Extrapolate GFE procedure is not moving the grids in the correct direction. When extrapolating a feature using observed movement direction, I'm getting the inverted direction. For example for due south, the movement direction has to be 360 for it to move south. That's all well and good. However, when the movement direction is 150 (Southeast) the feature moves northeast. This is using it as forward in time, not backward. Say you want to move a batch of clouds to the northeast (45 degrees) for the next hour in GFE. For the extrapolate tool, you used



the observed button to choose the direction and speed of movement. So you would have say 30 knots, and 45 degrees. Well when you use 45 degrees, it actually moves it southeast. Or when you want to move it southeast 155 degrees, it moves the feature/grid northeast. It appears that 90 degrees and 270 degrees works, but 360 and 180 are opposite. In addition, the problem occurs when using a model or Fcst too. So I think v would have to be multiplied by -1 also around line 281. In this section of the code, speed1 is set by dividing by resolution. A few lines later, u and v are divided by resolution again. This seems wrong to divide a second time.

**Operational Impact:** N/A

**Required Behavior:** Feature should move in the direction as user specified. (DR 14331)

#### **184. Problem: TextWS: Toggling "Autowrap" ON does not attempt to fix wrapping**

When editing a text product set the "Autowrap" to OFF. Enter a line that is sufficiently long. Toggle the "Autowrap" to ON and send the product. In A1 a warning pops up noting "one or more lines is longer than xxx characters" and pressing the button "Fix it" fixes the issue.

**Operational Impact:** Products Text may be truncated

**Required Behavior:** After the Autowrapping is set to the needed value and Send is pressed a warning should pop up noting "one or more lines is longer than xxx characters". Pressing the button "Fix it" fixes the issue by wrapping the line in question. (DR 14184)

#### **185. Problem: Missing Hydro QPE products in D2D**

BCQ site reported that there are a few missing products in D2D. The affected products are... NCEP/Hydro -> QPE -> 1hr WFO local MPE 1hr RFC Local Mosaic 6hr RFC Local Mosaic 24hr RFC Local Mosaic Matt checked with OAX and they are also missing these items. \*\*\*\*\*Duplicated on TBW3. \*\*\*\*\*Raytheon reported that the datasetid for MPE-Local is MPE-LOCAL-RRR where RRR is an RFC AWIPS ID in the database, and the baseHydroQPE.xml menu file is looking for modelName value="MPE-Local" It is a baseline configuration that needs to change (either to create a pointer in the DB to MPE-Local or to have the menu xml changed to somehow take into account for all the RFCs who monitor the various basins that are in the AOR for WFO. Update: It was later reported in a followup to TT 588654 that he opened on this same issue: I am now aware that the RFCs may not be publishing that product any longer. The product is on the web ... but for some reason it is not in AWIPS and it could be because it's been cut out. <http://water.weather.gov/precip/> I'm thinking that if RFCs are not longer pushing that information to AWIPS, then those menu entries should probably be removed.

**Operational Impact:** TBD

**Required Behavior:** NCEP/Hydro QPE menu should have sub-items available. (DR 13977)



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**186. Problem: TextWS: Non-US METARs do not auto update.**

In the Text Editor of TextWS enter AFOS Cmd for a non-US METAR and check the "Update Obs" check-box. The METAR will not update.

5/22/2015: It was determined that TT 670443 can be included under this DR as well. In this case, for the KXXX stations the Update Obs button works fine. For Pxxx and Txxx it is not working.

**Operational Impact:** User must manually update the Non-US METARs product

**Required Behavior:** The METARs are supposed to be updated automatically if the "Update Obs" check box is checked. (DR 13824)

---

**187. Problem: Svr Wx Plot poor behavior**

1. The NCEP/Hydro - Svr Wx Plot product uses information from text products STAHRY and STADTS. If there are no severe weather reports in those products, D2D will not load a blank frame, so the user doesn't have the desired "no report" feedback. 2. When reports do exist, far fewer than all are plotted. (Unfortunately, no reports today, so I can't attach any evidence, but one can compare the plots to the text or to AWIPS I to readily see the difference.) 3. Further, if there are no reports at all in the STAHRY set, an AlertViz error "Internal error "Initializing..." null pointer exception" pops up.

**Operational Impact:** N/A

**Required Behavior:** Product should operate as in AWIPS I, which will display a series of blank frames, one per hour, as needed. Not only does this provide the proper no-reports feedback, but it provides a time-match base to overlay other products that one may wish to display with the reports. Also, all reports need to make the display. (DR 13773)

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**188. Problem: Time Options does not work for NSHARP soundings**

"Options - Time Options" is not working for NSHARP soundings. For example, there are 84 hours of NAM BUFR soundings so choosing 64 frames will not allow the forecaster to see the entire 84 hours of data. However, if time option is working correctly the forecaster can choose the time option of "2 hours," for example, which displays every other hour of NAM BUFR forecasts from the initial time through 84 hours (0, 2, 4, 6, etc...84 hours).

-----Updated on 8/18/2015-----

The following comment was received from NCEP's Dave Plummer:

This seems to be a problem with how D2D uses its own option in relation to NSHARP. So, not something we can address. NSHARP only displays the data it is provided. If the D2D option is not sending in the right times, that's a problem with D2D not NSHARP and would need to be addressed by Raytheon.

**Operational Impact:** TBD

**Required Behavior:** See problem description. (DR 13221)

---

**189. Problem: Localization Perspective Allows Multiple Users to Edit Files Simultaneously With**

The localization perspective will allow two users to simultaneously edit the same file. In AWIPS 1, when a user in GFE tries to open a file that is already open by them or another user... you will receive a warning letting you know that the file is already open. Many times after AWIPS builds, there will be multiple users editing files to get the system back online. If the localization perspective doesn't warn the user when someone else has opened a file, there could be a lot of confusion with regard to changes. It would be best to set up the localization perspective so that if a file is already open, and another session is launched against that file, then the second instance should only be allowed read-only access to the file. This also needs to be fixed for the CAVE localization perspective.

**Operational Impact:** TBD

**Required Behavior:** TBD (DR 12353)

---

**190. Problem: MDCRS/ACARS Sounding does not display dewpoint curve**

The MDCRS/ACARS Sounding should create a dewpoint curve from observed mixing ratio data if available, or derive a dewpoint curve from available model data.

**Operational Impact:** N/A

**Required Behavior:** N/A (DR 9631)

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**191. Problem: The NWRBrowser GUI doesn't open when selecting Edit Climate Product in the Monitoring Controller GUI**

While regression testing Checkout\_Climate\_M test case, steps 7 and 8 failed. The NWRBrowser GUI didn't display after selecting Edit Climate Product button in the Monitoring Controller GUI from the text workstation.

**Operational Impact:** TBD

**Required Behavior:** TBD (DR 7587)

---

**192. Problem: goes/posesBufferStationInfo.txt file not processed properly by ndm endpoint**

DR 14212 described a problem where goes and poses sounding availability plots had no green times from the Satellite menu. It was written as if the data was not storing. Further investigation has determined that the reason for the data not storing is that the ndm endpoint (/awips2/edex/data/ndm) does not create a goes/posesBufSpi file under /awips2/edex/data/utility/common\_static/site/XXX/basemaps. As is shown by DR 14212 the operational impact is that these plots are not created because of this error. There is a valid

workaround which is to manually copy an AWIPS I version of goes/poesBufr.spi from ../localizationDataSets/XXX to the directory listed above and restart edex.

**Operational Impact:** N/A

**Required Behavior:** ndm endpoint should create the .spi files in common\_static. (DR 272)

### 3. Open DRs and DCSs

This section addresses open DRs and DCSs that have been deferred to the next immediate major release. The DRs identified in this section may have been initiated during the current release or during a previous release. The DCSs may have been initiated from a previous release or initiated in the current release. The CFRs are initiated in the current release.

#### DRs and DCSs for Release 17.1.1

Redmine	DR, DCS or CFR	Description
19405	DCS	SCAN Time-Height trend display impacted by addition of SAILS elevations to DMD
19378	DCS	Implement the use of SSL Certificates for all baseline hydro applications that have database access
19314	DCS	HTI and Local TCV/HLS Revisions for 2017 Hurricane Season
19293	DCS	2017 SSWW Operational Implementation - National TCV
19282	DCS	Allow message expiration from the Periodic Messages dialog
19281	DCS	Implement an option for message scheduling based on broadcast cycle
19279	DCS	Update afos2awips to utilize localization
19278	DCS	Enable Collaboration optimized extension for Triangulated rendering
19274	DCS	Selecting Create Grids From Scratch without an editable element and selected time range does nothing
19273	DCS	Radar menus have redundant entries for applications
19272	DCS	Tile sets need to support prefetching data
19271	DCS	Port AWIPS I MPE and Hydro code to Java from native wrapped code (Phase 2)
19270	DCS	Migrate localization files to common_static (Phase 2)
19265	DCS	Decommision Uengine by enhancing the DAF
19260	DCS	Ingest and display RAP and HRRR additional forecast hours
19188	DCS	NWRWAVES: Revisions to Support FY17 SS W/W Project
19106	DCS	Ingest and display BMT BUFR Data
18655	DCS	Remove direct database access from AWIPS
19580	DR	GFE: InvalidThreadAccess error thrown by offsetTime.py
19567	DR	MPE: Single-Pol radar is not displayed due to decoding error
19566	DR	TSI SwIT Bug Fixes
19512	DR	Remove unauthenticated database access - rehost and fixes
19502	DR	National TCV Overwriting Local TCVs
19500	DR	Additional changes for moving GFE edex_static files to common_static
19485	DR	WA 20.64 - TDWR radar menus have redundant entries for applications
19432	DR	WA 20.58 Port Run_DecompileDPA to Java: Regular and -parallel file log messages do not match
19427	DR	Review inappropriate words lists for CAVE and BMH

Redmine	DR, DCS or CFR	Description
19423	DR	PostgreSQL 9.5 upgrade is missing PostGIS 2.0
19422	DR	QPID fails with OutofMemory errors for direct memory after being down for an hour
19417	DR	September 2016 Security Patches
19355	DR	GFE: TCMWindTool shifting winds into different sector when 8 or 16 slices are used
19298	DR	xmrg -> grib files should not match the FFMPURIFilter
19289	DR	GFE: Section Headers for TCV and HLS should be created in All CAPS (As per item#6 of Mixed Case Text Guidelines Ver 12)
19288	DR	GFE: Headline statement should be ALL CAPS for TCV and HLS (As per item#5 of Mixed Case Text Guidelines Ver 12)
19286	DR	Cities and county names displayed at max density fail in shared displays
19283	DR	Resume an interrupted message from the beginning after an interrupt has concluded
19276	DR	Error returned when selecting Timeseries or Timeseries Lite from the MB3 popup menu when the cursor is off the map
19275	DR	PopUp Skew-T dialog is cut off on the left side
19264	DR	17.1.1 Build and Merge Support
19262	DR	Collaboration: Invited users are unable to join a reactivated session
19261	DR	The workstation freezes when connection to the Collaboration server is lost and the disconnect dialog is blocked
19258	DR	GLD lightning products disconnects the leader from Collaboration
19257	DR	Drawings failed to clear on the participant's display
19256	DR	GOES-R images that utilize a color scale display all white on the participant's display in shared display sessions
19255	DR	True Color images do not work in collaboration
19250	DR	TextWS: log several pieces of information for Text Editor and AWIPS Header Block
19246	DR	TextWS: Disallow issuing WarnGen PIL products using TextWS Text Editor window.
19243	DR	User Cannot Enter a Crest into the Database without Giving a Stage AND Flow
19239	DR	Hydro Database Manager: Crest History: db update error occurs when clicking OK after Apply
19225	DR	GOES-R decoder can fall behind incoming data
19201	DR	CAVE session hangs when selecting ISC Request Window when site cannot access IRT Server
19190	DR	D2D-Radar: SPG Long Range Reflectivity does not display current elevation
19185	DR	GFE: Storm surge popup message from NHCN not received by backup site
19167	DR	Diskspace One or more filesystems are at 95% utilized
19055	DR	GFE: TCV formatter crashes at inland sites due to missing StormSurgeWW edit area

Redmine	DR, DCS or CFR	Description
19036	DR	AvnFPS: Wind speeds above 11 knots getting flagged as abnormal weather conditions after climate update
18960	DR	WarnGen: Line of Storms not using correct storm duration on initial selection
18753	DR	RiverPro MND needs to be updated to match Mixed Case Guidelines
18625	DR	D2D: Paint error while using Diff function for Time Height plot
18605	DR	Retrieving text products from DB won't work in TEST mode
18576	DR	JSmartUtils.py fails in 16.1.1
18326	DR	Override default behavior of truecolor viz plugin
18131	DR	Hydro XDAT component does not update GUI or database while editing data
16771	DR	DAT dialogs failed to close after Clear; returned repeated error messages
16697	DR	HWR: Guam timezone listed as GSST instead of CHST
15030	DR	HPN data not being produced in Grib format in AWIPS2
14970	DR	No gridded data display when valid time is between 1 & 9 minutes after hour
14822	DR	GFE/GHG: GHG Monitor not displaying different segment text
14817	DR	Error returned after clearing and swapping 4-panel displays
14774	DR	CAVE Paint error related to RedbookFrame synchronization problems
14740	DR	HYDRO: SHEF message encoded incorrectly in Hydro Time Series
14570	DR	GFE: Product header issue with product editor
13520	DR	Localization: Null pointer when copying file to deleted protected file name
13519	DR	Localization: files with only a SITE version should be generated as CONFIGURED
13469	DR	VB Time Series - Y-axis range not dynamic nor configurable for some fields
12860	DR	Boundary level wind speed images scaled differently for different models
12421	DR	Color Scale Migrating - take 2 - TTR6534
12073	DR	Ocean flag in base topo still not being handled right - TTR6387
286	DR	D2D: fourSat projection display errors
269	DR	AK-NAM40 does not display from Volume Browser
89	DR	pressure for ldamsonet stations in d2d not plotting correctly

## 4. Design Changes and COTS/FOSS Requests

40 Design Changes and 21 CFRs for release 16.4.1 are summarized in this section.

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### 1. Redmine DCS\_19424

#### **Setup postgres streaming replication for use by DD central registry to support failover**

Set up and validate streaming replication between 4 hosts for use by the central registries running on ANCF/BNCF. Ideally, a script is needed to run that will automate the fail over process. The current heartbeat packages will utilize the script to manage which box is the master. The postgres rpms already support utilizing a separate configuration file for central registries. This would be expanded to include any setup/configuration necessary for streaming replication as well.

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### 2. Redmine DCS\_19202

#### **Add support for configurable cipher block mode to binLightning decoder.**

The AWIPS changes should be limited to configuration files:

- a menu xml file (to replace NLDN and GLD labels)

NOTE: A separate SE DCS will address the binLightningAESKeystore update (to add ENI's key).

---

### 3. Redmine DCS\_19131

#### **Remediation of high findings from source code scan - Part 2**

Source code scanning was performed on the 14.2.1 AWIPS II code base and the following high findings were found, which need to be remediated. See remediation finding list (not attached for security reasons) for specific items.

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### 4. Redmine DCS\_19124

#### **Port AWIPS I MPE and Hydro code to Java from native wrapped code (Phase 1)**

Split out from DCS 18780:

There are a variety of AWIPS1 native C libraries being run from EDEX. They currently trigger off an EDEX quartz cron or an event, and then EDEX spawns a separate process that runs the C application. Porting these native C libraries to Java would significantly reduce nativeLib build complexity, bring these applications into the AWIPS2 architecture, and make the code more maintainable and perform faster.



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## 5. Redmine DCS\_19123

### Migrate localization files to common\_static (Phase 1)

Split out from DCS 18780:

RTS suggested improvements in localization by migrating localization files to common\_static.

- Move edex\_static grid files to common\_static
- Move distribution pattern files from edex\_static to common\_static

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## 6. Redmine DCS\_19122

### Add Grib Wizard to Localization Perspective

Split out from DCS 18780:

A grib wizard needs to be added to the Localization Perspective to simplify adding new grib models to the system. The wizard should be a guided set of GUIs that help a reasonably knowledgeable user provide information known about the grib model. The wizard will automatically create or alter the necessary localization files to ingest and display the new model data, instead of the current entirely manual process of editing files by hand.

The wizard needs to support:

1. Ingesting the data so it can be decoded, stored, and displayed in D2D through the product browser.
2. Creating volume browser files so the data is listed in the volume browser in D2D.
3. Enabling a user to cancel at any step in the process, much like an installer wizard, though prompting them if they are sure when they are partially through the process.
4. Exporting any generated/changed config files so that they can be uploaded to VLab for check in.

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## 7. Redmine DCS\_19115

### Make openfire improvements based on realtime watching of national test

From monitoring the national test of collaboration on March 10, 2016, a few things were noticed regarding Openfire.

1. The roster cache size needs to be bigger. Probably 32 MB aka 33554432.
2. The user cache size needs to be bigger. Probably 1 MB aka 1048576.
3. The group metadata cache size needs to be bigger. Probably 1 MB aka 1048576.
4. Update the health\_check.sh and reset\_settings.sh scripts for these updated cache sizes.

5. Update health\_check.sh and reset\_settings.sh to verify/set http binding to enabled. (Specifically, requested by dmaxey because users use a webpage to reset their passwords). The scripts are currently suggesting/setting that http binding to disabled.
6. Update health\_check.sh and reset\_settings.sh scripts to set openfire property of rss.enabled to false.
7. Include health\_check.sh and reset\_settings.sh in the Openfire RPM. They are not currently installed with any of the chat server RPMs, they were emailed to NCF. While they check more than openfire settings, that's probably the best spot for them because that is mostly what they check.
8. Modify openfire.sh to prevent openfire from running as root. (So far this issue has only been observed on TNCF.)

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## 8. Redmine DCS\_19105

### Remediation of high findings from source code scan - Part 1

Source code scanning was performed on the 14.2.1 AWIPS II code base and the following high findings were found, which need to be remediated. See remediation finding list (not attached for security reasons) for specific items.

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## 9. Redmine DCS\_19099

### Remove FLASH Products from MRMS product menus

Remove Flooded Locations And Simulated Hydrographs (FLASH) products from AWIPS/MRMS menus.

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## 10. Redmine DCS\_19089

### NCF - Implement NIC bonding on MHS servers

This DR affects NCF only.

NIC bonding was never implemented on the NCF MHS servers. In addition to the Linux configuration file changes that are needed, the mhs\_pkg service file must be changed to allow bond0 for the MHS floater instead of eth0 only. In /etc/init.d/mhs\_pkg, the required changes are:\

Add new function before getHWaddr():

```
function getIFname {
  if ifconfig bond0 &> /dev/null; then
    echo bond0
  else
    echo eth0
  fi
  return 0
}
```

In start\_mta() and stop\_mta() functions:  
Replace "IFNAME=eth0" with "IFNAME=`getIFname`".

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## **11. Redmine DCS\_19084**

### **Update BMH to use the new date/time spinner available in the common baseline**

Currently, BMH uses a collection of spinners that allow the user to select the date/time - refer to the Weather Messages dialog for example. A new common date/time spinner is now available in the common baseline that already handles all of the date/time math and it has a much cleaner, compact appearance - refer to the Hydro Time Series dialog in 16.2.2 for an example. Ideally, BMH should be updated to use the new common spinner across all dialogs that allow date/time entry and the bmh-specific date/time spinner should be reduced to only support periodicity.

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## **12. Redmine DCS\_19067**

### **Add missing capabilities/functionality to the DateTimeSpinner**

The current implementation of com.raytheon.viz.ui.widgets.DateTimeSpinner is always enabled and there is not a way to toggle enable/disable on the widgets incorporated into the DateTimeSpinner. There are a few dialogs that currently use a different implementation of date/time widgets that will enable or disable the controls in reaction to certain actions on the dialog.

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## **13. Redmine DCS\_19064**

### **DBGeo Plugin: Configuration file controlled capability for ingest and display of geometry data**

DBGeo Plugin: Configuration file controlled capability for ingest and display of geometry/attribute data, such as active fires and hurricane intensity estimates, exploiting data which are stored directly in the Postgres database. Configuration file controlled capability for ingest and display of geometry/attribute data, such as active fires and hurricane intensity estimates, exploiting data which are stored directly in the Postgres database.

The AWIPS II DBGeo plugin is designed to handle, store, and render generic geospatial data and any relevant attributes. All of the relevant information surrounding these data/attribute combinations will be stored in the Postgres database, and there is no interaction with the HDF5 store. A "GeoDataRecord" have many attributes associated with the geospatial data, and these attributes may be of two types - Float and String. The geospatial data are stored as a Geometry, which allows the plugin to handle differing datasets including, but not limited to, active fires and hurricane intensity. A geometry can be created, for instance, based upon a region of active fires whose information (file attributes) is already stored in the database. The Geometry/data are rendered to the display via a menu pull-down under "Obs" in D2D, based upon the associated attributes and any user-defined properties, including the shape to draw, color, and thickness.

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## 14. Redmine DCS\_19056

### Remove single implementation interfaces from Data Delivery

Code Cleanup DR.

Many, Many of the interfaces in Data Delivery are single implementations.

Some of these are because there is only one current implementation. In other cases, there will only ever be one implementation of said interface.

We need to cleanup and get rid of these interfaces and make them direct instantiations.

We have run it spring loading issues regarding transactional annotations on interfaces rather than specific implementations. This would hopefully alleviate and prevent more of that.

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## 15. Redmine DCS\_19054

### Improve time entry widget in Calendar dialog

Currently, the Calendar dialog has controls that forces the user to change the hour or minute value by repeatedly clicking the up or down arrow until the desired value is reached. This might involve over 40 separate clicks to achieve the precise time. The user should be able to hold down a single button/key to spin on to or near the desired hour or minute much faster.

In addition, the user should have the ability to manually type an hour or minute value directly into the appropriate text box. Currently, the user cannot type in values in the Calendar dialog (e.g., in the Calendar recalled from the Select Input Message dialog via BMH).

Finally, continuously incrementing seconds/minutes/hours past the maximum value should "roll over" and increment the date/hours/minutes, respectively.

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## 16. Redmine DCS\_19051

### Enhanced DMW Plugin: Further abstraction of the GOES-R Derived Motion Wind (DMW) plugin is needed to take advantage of pressure level information and add flexibility to implement both GOES-R and Himawari AMVs

The GOES-R Derived Motion Winds (DMW) plugin will provide a high-demand wind vector product to support operations at National Centers, WFOs and RFCs. The plugin is currently designed to display winds for each of six channels described in the ATBD (CHs 2, 7, 8, 9, 10, 14). Winds at each channel in the baseline plugin are pulled individually from the menu via channel number, and barbs are colored green, yellow, or red for relatively low, medium, and high wind speeds (in knots), respectively. However, there is no way for a user to determine what atmospheric pressure levels the winds are valid for, an operationally relevant factor which is found in some legacy products in AWIPS. Further abstraction of the DMW plugin would allow this information to be provided, and would enable much more flexible implementation of both GOES-R and Himawari DMW products under a single plugin. An enhanced plugin would also provide a method to display winds for a certain atmospheric range, and with flexible color scaling (e.g. according to level or magnitude) regardless of GOES channel. Wind information on

atmospheric layers will be delineated using the pressure level information already carried in the current files, and following conventions already used for other products in AWIPS 2. This information cannot be accessed in the current configuration.

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## 17. Redmine DCS\_19048

### **Losing connection to collaboration chat server should be handled better**

There are a few different ways to lose connection to the collaboration chat server after you have logged in. Known ways:

1. Network connectivity loss
2. Kicked from the server by an admin
3. Logging in from a different cave (provided the server settings are set up for this)

When this happens, cave pops up a window telling you have been disconnected and asking you if you would like to login again. It also closes ALL open collaboration views/tabs. Ideally we should improve this handling in the following ways:

1. Improve the error messages of the popup box. In particular the third scenario's error message is very technical and would probably not make sense to a user. A better error message for that scenario would be along the lines of, "You logged in elsewhere."

2. Keep the chat tabs open but partially disabled. There is not much reason to keep the Collaboration Information tab open, but on chat tabs someone may want to scroll back up and read the history of the chat before they were disconnected. As part of keeping those tabs open, we should do the following:

1. We should send system messages (ie bold and black such as the entered/exited room messages) to each chat tab's list of messages saying "You have been disconnected." or something along those lines.

2. We should disable the send box at the bottom so users cannot attempt to send more chats.

3. We should disable the right click options in the participants list.

4. We should disable the toolbar buttons, etc.

5. So really the only thing the user can do on those chat tabs once disconnected is scroll for reading purposes.

6. If the user logs back in with the same cave, we should probably close the leftover chat tabs from the previous session.

Otherwise they will be misleading as group chat rooms will potentially have messages missing in the middle. We should probably warn users that this will be a side effect of re-logging in with the same cave.

Ideally this should be worked on or after the 2.3 branch because the improved Smack 4.x API may make it easier to distinguish between disconnection reasons. Furthermore, given that chat

tabs can be floating and floating views were reworked for Eclipse 4, we may want to not work this before the 2.4 branch that is compatible with Eclipse 4. Otherwise code to keep disconnected tabs open or close them on re-login may have to be changed again. This ticket could also be split into multiple tickets.

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## 18. Redmine DCS\_19032

### Remove microEngine dependency from PGEN retrieveActivity utility

Remove microEngine dependency from PGEN retrieveActivity utility.

Note; R9714 (Replace micro engine for PGEN retrieveActivity) is ready to commit. Changes are in two repositories, AWIPS2\_NCEP and AWIPS2\_Dev\_Baseline. Changes in AWIPS2\_Dev\_Baseline are some automatically generated python code under sitePackages/dynamicserialization/dstypes/gov/noaa/nws/ncep/dataplugins/pgen.

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## 19. Redmine DCS\_18993

### Collaboration needs preference to play a sound when receiving an invite

From the national test of March 10, 2016, there was a request for an enhancement to have an option to play a sound when you receive an invitation to join a session. Add this as an Eclipse preference.

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## 20. Redmine DCS\_18974

### Improve New Map Projection dialog to support NCP and more use cases

From NCEP VLAB ticket 16079:

Remove and replace NCEP's map projections dialog after improving the CAVE map projection dialog.

From the NCEP ticket:

This is the same general tool as CAVE>New>Map Projection... dialog "Create Projection", however with some modifications. This ticket should remove this CAVE>NCP>Tools>Custom Area... entry and just let the NCP users use the aforementioned CAVE Map Projections tool, however with some of the NCP features:

- The dialog should populate with the current Display projections so users get a reasonable and known starting point.
- "World Extents" should be included
- Add a help feature (eg., mouseover) that briefly explains what each entry means

Note that the primary purpose of this tool for NCEP users will be to create the projection they like and then save it as a named Predefined Area using CAVE>NCP>File>Save>Area...

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## 21. Redmine DCS\_18867

### BMH: Change coloring for Trigger messages in Broadcast Program dialogs

It can be hard to find the trigger messages in the broadcast programs dialog. Need to update the rows or text of the column to make trigger messages more visible. This should be in the main dialog as well as the new/edit dialogs. Also the Trigger Selection Dialog should be updated to a dual list instead of a giant check box list to make it easier to determine which messages are triggers.

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## 22. Redmine DCS\_18817

### GFE: HPCQPF Grid Definition in AWIPS

This DCS is written to address the changes that need to be made to GFE related to the D2D changes in DCS #18816.

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## 23. Redmine DCS\_18816

### D2D: HPCQPF Grid Definition in AWIPS

1. Ingest, store, and display WPC's 2.5km QPF.
2. Discontinue ingesting and storing WPCs 10km and 5km QPFs

Currently, WPC is sending two versions of their QPF to AWIPS - a 10km version stored in the awips2 database as HPCqpf and a 5km version stored as HPCqpfNDFD. WPC would like to start disseminating a 2.5km QPF and discontinue the 10km and 5km QPFs, with as little impact to users as possible.

A question we have is whether we can simply change the resolution of HPCQPF from 10km to 2.5km with a modification to the gribModels\_NCEP-7.xml?

The HPCqpf entry in the base gribModels\_NCEP-7.xml table specifies the entry `<grid>226</grid>` and the HPCqpfNDFD entry `<grid>197</grid>`. As a first step, would removing the `<grid>226</grid>` entry for HPCqpf allow the 10km grid to continue decoding as HPCqpf? At a later time after the gribModels\_NCEP-7.xml file has been implemented, we would stop issuing the 5km and 10km QPF and start issuing 2.5km grids. Would that result in the 2.5km QPF storing as HPCqpf? There would still be some other changes needed to the parameterInfo file so GFE could ingest all the QPF grids through day 7.

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## 24. Redmine DCS\_18796

### Implement new Radar - Shift change checklist product

The ROC is implementing a new product (SCC) in WSR-88D Build 18 (beta/deploy July/October 2017) via CCR NA15-00153 that encapsulates WSR-88D checkpoints the National Weather Service requires be checked at least once per shift regardless of site configuration, system operation mode or meteorological conditions. The SCC provides useful information on the performance and status of the radar and provides necessary information for the WSR-88D



Hotline to effectively troubleshoot issues. The SCC product should display on AWIPS as a text product (e.g. WSRSCCYYY) where YYY is the radar ID. This would be consistent with other radar text products in AWIPS, such as the STP or FTM. This product should be listed on the "One Time Request" GUI, but not the "RPS List Editor" GUI. A one-time request should be issued for SCC at the top of every hour via NDM file cronOTRs.xml and will be centrally collected.

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## **25. Redmine DCS\_18795**

### **Allow Radar VCP selection via AWIPS**

The ROC is implementing in WSR-88D Build 18 (beta/deploy July/October 2017) via CCR NA15-00151 the ability for AWIPS to issue requests to change the VCP and Enable/Disable AVSET and SAILS. Upon line connection, the RPG will send to AWIPS, message 12 which contains the list of available commands. This message will only be sent to the AWIPS that is authorized to issue these commands. AWIPS will issue VCP commands by sending Message 14 to the RPG. Draft ICDs are available for these new messages.

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## **26. Redmine DCS\_18785**

### **Convert LSR Products to Mixed case**

Samples to be provided.

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## **27. Redmine DCS\_18781**

### **Frame suppression to support GOES-R**

Some GOES-R imagery is received in tiles. If a tile has not come in or is missing, then it creates a display discontinuity. This display discontinuity can be distracting to end users. For tilset loaded products provide a checkbox in the legend click menu to enable the user to elect to not show frames that are missing tiles. This needs to be saveable for the resourcedata object so that it can be in a procedure.

---

## **28. Redmine DCS\_18779**

### **Decommision Uengine by enhancing the DAF**

The requirements to be satisfied by this WA are below. This task shall include updating the existing DAF documentation with this new functionality.

#### **Must Haves**

1. Fix defect(s) in "climate" requests. getAvailableTimes() is returning nothing, and we can't retrieve data either. Make climate data available through the DAF, creation of method to query available identifier values.

2. Fix getEnvelope() in JDataRequest.py (not working). Note: Easy fix: needs to import shapely.wkt, rather than just shapely.
3. Add Unit/regression tests for each supported plugin/data type.
4. Fix setting locationNames in “warnings” (not working - it does not filter the results).
5. Fix getAvailParameters for forecast database in GFE (returns nothing).
6. Add ability to supply query parameter when setting identifiers and supply standard SQL query options (>, <, IN, LIKE, etc). Default is equals.
  - a. request.addIdentifier(‘starttime’, ‘1457541225’, ‘>’)
    - i. Return results with starttime greater than 1457541225
  - b. request.addIdentifier(‘cwa’, ‘OUN’, ‘NOT IN’)
    - i. Return results where the cwa is not OUN
7. Fix Binlightning fails when certain parameters are requested.
  - c. Call getAvailParameters and pass the returned list in to setParameters to see errors.

#### Nice To Haves

1. Add ability to query available identifier values, rather than just the keys.
2. Add ability to request data by datauri. When listening to a subscription or the Data Notification Framework you receive datauri’s. To request that piece of data now you need to know the datauri structure which is not readily available and leaves code easily susceptible to breaking when changes occur. CS Expand SPC Watch to Outer Coastal marine sites.

---

## 29. Redmine DCS\_18778

### Performance Improvements for CASA radar

#### Background:

CASA software deployed in 16.1.1 has some performance problems in high activity times.

Latency is 5752 seconds, or roughly an hour and a half because the decoder was running over an hour behind. There are about 400 products an hour which means AWIPS has to decode a product every 9 seconds to stay on top of things. At the time of the slowdown it was taking 16+ seconds on average to decode which is why it was falling behind. Today the times are closer to 6 seconds, so even on a good day it’s close to the edge of the maximum throughput the current configuration can handle.

**Requirements:**

95% of the decode time is being spent storing the data in pypies. A big part of the problem is that all the data for each hour is stored in a single giant file, there are 3 things to do to speed it up to be satisfied by this WA:

- 1) Set up a path keys file for this data, then split the files up a bit and things should speed up. The path keys are in a localization so it would be easy to set this up at a site with no software changes.
- 2) Turn on compression for this data. A good portion of the storage time is simply due to the disk speed with this much data(20GB an hour), compression would decrease disk usage and speed things up.
- 3) Make the decoder to run in a clustered context and use both edices.

---

**30. Redmine DCS\_18724****Data Delivery PDA**

This DCS covers the implementation of the PDA (ESPDS) data provider which will be added and used in Data Delivery to retrieve, ingest and display GOES-R data for this initial phase.

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**31. Redmine DCS\_18598****Expand availability of Derived Parameters to GFE and DAF**

Expand availability of Derived Parameters to GFE and DAF. Derived parameters are often needed elsewhere than D2D. Their availability in GFE and DAF would be a great asset.

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**32. Redmine DCS\_18590****NWPS: Baseline all coastal domains**

Update the xml files in edexOsgi/com.raytheon.uf.tools.gfesuite/nwps/domains/.

There should be 35 domain (xml) files in the baseline. At least one is missing.

---

**33. Redmine DCS\_18351****Updates for new PQPF data**

WPC would like to increase their resolution for PQPF products from 5km to 2.5km. In our testing, of this new data, it looks like EDEX is picking it up, but it does not know how to name or store it. Currently, it is storing as such:

```
metadata=# select * from grid_info where datasetid='GribModel:7:5:221';
```

```
id | datasetid | ensembleid | secondaryid | level_id | location_id | parameter_abbreviation
```

-----+-----+-----+-----+-----+-----+-----

- 426406 | GribModel:7:5:221 | | 30 | 114 | TP10pct6hr
- 426409 | GribModel:7:5:221 | | 30 | 114 | TP50pct6hr
- 426411 | GribModel:7:5:221 | | 30 | 114 | TP90pct6hr
- 426412 | GribModel:7:5:221 | | 30 | 114 | TP10pct24hr
- 426415 | GribModel:7:5:221 | | 30 | 114 | tp24c6
- 426418 | GribModel:7:5:221 | | 30 | 114 | TP90pct72hr
- 426421 | GribModel:7:5:221 | | 30 | 114 | TP203.2mm24hr
- 426428 | GribModel:7:5:221 | | 30 | 114 | tp6c6
- 426407 | GribModel:7:5:221 | | 30 | 114 | TP50pct24hr
- 426430 | GribModel:7:5:221 | | 30 | 114 | tp6c5
- 426408 | GribModel:7:5:221 | | 30 | 114 | TP90pct24hr
- 426410 | GribModel:7:5:221 | | 30 | 114 | TP10pct72hr
- 426413 | GribModel:7:5:221 | | 30 | 114 | TP406.4mm24hr
- 426419 | GribModel:7:5:221 | | 30 | 114 | TP406.4mm72hr
- 426420 | GribModel:7:5:221 | | 30 | 114 | TP50.8mm72hr
- 426423 | GribModel:7:5:221 | | 30 | 114 | TP203.2mm72hr
- 426425 | GribModel:7:5:221 | | 30 | 114 | tp6c8
- 426427 | GribModel:7:5:221 | | 30 | 114 | tp6c4
- 426414 | GribModel:7:5:221 | | 30 | 114 | TP50pct72hr
- 426416 | GribModel:7:5:221 | | 30 | 114 | tp24c8
- 426417 | GribModel:7:5:221 | | 30 | 114 | TP101.6mm24hr
- 426422 | GribModel:7:5:221 | | 30 | 114 | TP101.6mm72hr
- 426424 | GribModel:7:5:221 | | 30 | 114 | TP25.4mm72hr
- 426426 | GribModel:7:5:221 | | 30 | 114 | POP
- 426429 | GribModel:7:5:221 | | 30 | 114 | TP101.6mm6hr

(25 rows)

Also, when displayed via the product browser, the units were mixed between inches and mm.

Need to update code to decode, store, and display this data properly.

---

### **34. Redmine DCS\_18218**

#### **Investigate having thin client proxy at regional HQs reject requests to uEngine**

At present uEngine is deprecated and only used for local apps and the NCP. Thin client does not support either of those at this time. uEngine is a security risk, but it has a very specific path that we should be able to reject when coming in from outside the firewall with authenticated users. The regional HQ servers have an apache httpd (http server) instance set up to receive incoming requests and authenticate against the LDAP. Once the user is authenticated, it either redirects the CAVE requests to edex at ec:9581/services or pypies at dx2:9582/pypies based on the path in the http request.

EDEX provides multiple different services at different paths, such as /services/thrift, /services/pyproductjxb, etc. uEngine is a security risk, especially from outside the firewall, if someone managed to first authenticate against the LDAP. Since uEngine is not required to support thin client capabilities, we should block those paths when they are incoming from outside the firewall.

Investigate updating the regional HQ proxy settings in httpd conf files and having the httpd proxy reject requests to

/services/pyproductthrift and /services/pyproductjxb. (Those are the two routes to access uEngine). After updating the conf, test against TBWO with a connection over the internet and verify thin client still works. Also verify that entering those addresses in a web browser will reject the request. It should probably return error 403 for those two paths.

Note this only applies to regional HQs for thin client, not CWSUs since those are inside the firewall and do not use the LDAP authentication.

---

### **35. Redmine DCS\_17912**

#### **Add capability to import and plot GeoJSON object files**

Many GIS related impact events (e.g. wildfire, hazmat, flooding, etc) can be quickly plotted in CAVE via the GeoJSON file sent to the office. The GeoJSON could be created internally by NWS IT personnel. Also, the GeoJSON impact event file(s) could be created by NWS First Responder and Emergency Partners, and sent to the WFO office to support an impact event. Quickly getting this impact event GeoJSON file into CAVE will improve the supporting DSS forecast information. GeoJSON plotting would need to be updated without much system management (e.g. rebooting EDEX Servers). For example, the GeoJSON file is saved in AWIPS, and the DSS forecaster can immediately plot the map, via a Maps dropdown entry, in D2D or other Perspective.

---

### **36. Redmine DCS\_17830**

#### **Just in Time Training Plugin**

Just in Time Training Plugin.

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### 37. Redmine DCS\_ 17826

#### Jason Altimetry Products

Sea Surface Height Anomaly, Significant Wave Height, and Wind Speed Data

Test files are accessible from: <ftp://ftp.nodc.noaa.gov/pub/data.nodc/jason2/ogdr/>.

The NetCDF4 files are in the first directory/folder at the FTP site.

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### 38. Redmine DCS\_ 17825

#### Ingest and Display NOS data (unstructured)

Unstructured Grids

a. LEOFS, CBOFS, DBOFS, TBOFS (ROMS model based grids)

The LEOFS data is publicly available on FTPPRD at:

<http://ftpprd.ncep.noaa.gov/data/nccf/com/nos/prod/glofs.YYYYMMDD/>

The available netcdf files are:

`glofs.leofs.fields.[forecast|nowcast].YYYYMMDD.tCCz.nc`

`glofs.leofs.stations.[forecast|nowcast].YYYYMMDD.tCCz.nc`

b. NGOFS (FVCOM based grid)

c. Navy HYCOM

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### 39. Redmine DCS\_ 16915

#### Initial Migration from AFOS PILS to AWIPS ID

The AFOS era CCCNNNXXX PILs have no significance internal to the local site's AWIPS (CCC is the AFOS communications node which does not exist anymore). There are conflicts when products are stored from observations or MOS products that have identical XXX identifiers but are from different locations. The purpose of this DR is to extend the textdb command, the TextWS interface and text triggers to be able to use AWIPS IDs (CCCCNNNXXX, where CCCC is the ICAO identifier that corresponds to the XXX identifier). At this time, there will be no change to disable any function that uses the AFOS PIL. For a majority of products, the NNNXXX part of the AWIPS ID is sufficiently unique to identify the product and this makes it easier to find products from other sites, i.e., users don't need to know the arcane mapping of XXX to the AFOS CCC. When there are duplicate XXX, the CCCC of the AWIPS ID will usually be K,P,M,C in front of the XXX and that also makes product retrieval easier than trying to determine the AFOS CCC.

**Operational Impact:**

- 1.Allows for simpler recall of standard NWS products from the TextWS.
- 2.Allows for more specific triggers to be set up.
- 3.The fxatext database structure should not have to be changed as it already has fields for the CCCC, NNN, and XXX of the AWIPS ID.
- 4.No immediate changes to applications that store or retrieve products from the text database except for those processes that are part of text ingest and storage. This is because this is an initial capability that allows migration to start.
- 5.Since products are transmitted using WMO headers, there is no impact to external customers if the AFOS PIL is not used internally in AWIPS.
- 6.May obviate the need for the national\_category\_table.template and bit\_table.dat

**Requirements:**

- 1.textdb will be able to read, write and inventory text products by the 10 character AWIPS id.
- 2.textdb will have the capability to log when products are retrieved or stored by the legacy AFOS PIL. This is to aid in determining all processes that will need to be changed for the migration away from AFOS PILS
- 3.TextWS interface will be able to recall products by the NNNXXX portion of the identifier where NNNXXX is unique and the full CCCCNNNXXX.
- 4.TextWS Products menu will be able to recall products by the full AWIPS ID.
- 5.Triggers will be able to be specified using the full CCCCNNNXXX AWIPS ID.
- 6.Text decoders may have to be updated to make sure the wmoid field in the text database is properly populated with an appropriate ICAO based on the XXX, not necessarily the WMO CCCC of the product containing the data.

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**40. Redmine DCS\_13499****Missing Precipitable Water % of Normal in VB**

This problem was reported by Dave@OAX, 402-359-4381OAX site have not been receiving precipitable water % of Normal in their VB on any workstation. The path is: cave -- vb -- moisture -- pw % of normal. They have not green time - nothing.This is also a problem in AWIPS 1.



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**Redmine CFR\_19484****Upgrade objectweb ASM from version 1.53 to 2.2**

XIn the solution of #19419 ASM-2.2 is needed as a compromise between the two contentious versions.

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**Redmine CFR\_19152****Add python PyGreSQL module to baseline**

Request for pyGreSQL python module for use by RFCs. "PyGreSQL is an open-source Python module that interfaces to a PostgreSQL database. It embeds the PostgreSQL query library to allow easy use of the powerful PostgreSQL features from a Python script."

The IHFS (Integrated Hydrologic Forecast System) database at WFOs and RFCs, and the CHPS (Community Hydrologic Prediction System) database are central components of hydro operations. Python access for local applications and model development support is essential until the DAF (Data Access Framework) can provide such meaningful access. Essentially all access is read-only, with no updates or inserts.

---

**Redmine CFR\_19151****Add python lxml module to baseline**

Request for lxml python module for use by RFCs. "lxml is the most feature-rich and easy-to-use library for processing XML and HTML in the Python language." XML tools are essential for RFCs as the CHPS configuration is primarily driven by XML definitions.

---

**Redmine CFR\_19150****Add python Pandas Data Analysis module to baseline**

Request for pandas python module for use by RFCs. "Pandas is a Python package providing fast, flexible, and expressive data structures designed to make working with relational data both easy and intuitive."

---

**Redmine CFR\_18930****Update security FOSS to match CXF 3.1.5 - org.bouncycastle (bcprov)**

The following FOSS needs to be updated as CXF dependencies:

org.bouncycastle (bcprov) jdk15-1.46 -> jdk15on-1.54

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### **Redmine CFR\_18929**

#### **Update security FOSS to match CXF 3.1.5 - org.apache.ws.security (wss4j)**

The following FOSS needs to be updated as CXF dependencies:

org.apache.ws.security (wss4j) 1.6.19 -> 2.1.4

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### **Redmine CFR\_18928**

#### **Update security FOSS to match CXF 3.1.5 - org.apache.xml.security (xmlsec)**

The following FOSS need to be updated as CXF dependencies:

ufcore-foss:

org.apache.xml.security (xmlsec) 1.5.6 -> 2.0.5

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### **Redmine CFR\_18904**

#### **Address POA&M #69895.**

POAM 69895

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### **Redmine CFR\_18845**

#### **Upgrade ActiveMQ to 5.13.x**

Critical vulnerability in versions prior to 5.13.

Version 5.13.0 is available and approved by RTN ITSEC (for now)

CVE-2015-5254

Summary: Apache ActiveMQ 5.x before 5.13.0 does not restrict the classes that can be serialized in the broker, which allows remote attackers to execute arbitrary code via a crafted serialized Java Message Service (JMS) ObjectMessage object.

Published: 1/8/2016 2:59:00 PM

CVSS Severity: v3 - 9.8 CRITICAL

v2 - 7.5 HIGH

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### **Redmine CFR\_18844**

#### **Add jasypt 1.9.2 foss**

We need the jasypt foss project so the registry works correctly with security. Add jasypt as a new plugin in the AWIPS2\_foss repo.

---

### **Redmine CFR\_18842**

#### **Update security FOSS to match CXF 3.1.5 - openSAML**

The following FOSS need to be updated as CXF dependencies:

ufcore-foss:

org.apache.xml.security (xmlsec) 1.5.6 -> 2.0.5

AWIPS2\_foss:

org.bouncycastle (bcprov) jdk15-1.46 -> jdk15on-1.54

org.apache.ws.security (wss4j) 1.6.19 -> 2.1.4

org.opensaml 2.6.5 -> 3.1.1

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### **Redmine CFR\_18841**

#### **Upgrade org.apache.commons.collections to 3.2.2**

Fixed in Apache Commons Collections 3.2.2/4.1

High: Remote Code Execution during object de-serialization

The Apache Commons Collections library contains various classes in the "functor" package which are serializable and use reflection. This can be exploited for remote code execution attacks by injecting specially crafted objects to applications that de-serialize java objects from untrusted sources and have the Apache Commons Collections library in their classpath and do not perform any kind of input validation.

The implemented fix can be tracked via its related issue COLLECTIONS-580:

3.2.2: de-serialization of unsafe classes in the functor package will trigger an "UnsupportedOperationException" by default. In order to re-enable the previous behavior, the

system property "org.apache.commons.collections.enableUnsafeSerialization" has to be set to "true".

4.1: de-serialization support for unsafe classes in the functor package has been completely removed (unsafe classes do not implement Serializable anymore).

The potential exploit was first presented at AppSecCali2015 [3] on 28 January 2015 by Gabriel Lawrence and Chris Frohoff. Based on these exploits, Stephen Breen published on 06 November 2015 attack scenarios [4] for various products like WebSphere, JBoss, Jenkins, WebLogic, and OpenNMS. The Security team was not informed about these security problems prior to their publication. No CVE id was assigned for the Apache Commons Collections library, please refer to [1] or [2] for more information about the general problem with Java serialization.

Affects: 3.0 - 4.0

Related links:

Vulnerability Report for Oracle Weblogic Server: CVE-2015-4852

Vulnerability Report for Red Hat JBoss products: CVE-2015-7501 (Red Hat Portal)

Apache Commons statement to widespread Java object de-serialisation vulnerability

Presentation @ AppSecCali2015 by Lawrence and Frohoff

Attack scenarios for various products by Stephen Breen

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## Redmine CFR\_18840

### Upgrade Apache HttpClient to 4.3.6

CVE-2015-5262

Summary: http/conn/ssl/SSLConnectionSocketFactory.java in Apache HttpComponents HttpClient before 4.3.6 ignores the

http.socket.timeout configuration setting during an SSL handshake, which allows remote attackers to cause a denial of service

(HTTPS call hang) via unspecified vectors.

Published: 10/27/2015 12:59:07 PM

CVSS Severity: v2 - 4.3 MEDIUM

Apache CXF version 3.1.5 (see issue #5371) requires OpenSAML 3.1.1 which specifies Apache httpclient 4.3.6.

Version 4.3.6 is a bug fix version with the following release notes:

Release 4.3.6

-----  
HttpClient 4.3.6 (GA) is a maintenance release that fixes several problems with HttpClient OSGi bundle as well as some other issues reported since release 4.3.5.

Please note that as of this release HttpClient disables all versions of SSL (including SSLv3) in favor of the TLS protocol by default. Those users who wish to continue using SSLv3 need to explicitly enable support for it. Users of all HttpClient versions are advised to upgrade

---

### **Redmine CFR\_18839**

#### **Upgrade Apache CXF to 3.1.5**

The upgrade to Jetty in #18835 will require an upgrade to Apache CXF as well.

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### **Redmine CFR\_18838**

#### **Upgrade spring framework to 4.2.4**

We are currently using spring framework 4.1.6. There have been good bug fixes since then so we should upgrade.

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### **Redmine CFR\_18837**

#### **Upgrade camel to 2.16.2**

We are using camel 2.16.0. We should upgrade to 2.16.2 to get a multitude of bug fixes and a vulnerability fix

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### **Redmine CFR\_18836**

#### **Upgrade Jep to 3.5**

We are on Jep 3.4.1. Jep 3.5 adds performance improvements and can redirect python prints to Java System.out which will help with our cave console logs. Upgrade to the latest 3.5 release.

---

### **Redmine CFR\_18835**

#### **Upgrade jetty to 9.2.14**

We are using jetty 9.0.7 which is about two years old. Upgrade to 9.2.14 to get the bug fixes of the past few years.

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### **Redmine CFR\_18820**

#### **Upgrade Jackson json to 2.6.5**

The Jackson JSON library has moved on to a new major version. Version 1 is still being maintained with bug fixes as of Oct 2015, but it is recommended that users upgrade to version 2.

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### **Redmine CFR\_18297**

#### **Apache HttpClient-3.1 vulnerable and end-of-life -> Replace with Apache HttpComponents**

XVulnerabilities:

CVE-2012-6153; CVE-2014-3577

End-of-life:

<https://hc.apache.org/httpclient-3.x/>

AWIPS2\_build: foss/yajsw-11.11/lib/extended/commons/commons-httpclient-3.0.1.jar

ufcore-foss: lib/org.apache.http/commons-httpclient-3.1-src.zip

AWIPS2\_foss/lib/edu.uci.ics.crawler4j/apache-mime4j-core-0.7.jar (4.1.2) affected by CVE-2012-6153

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### **Redmine CFR\_18163**

#### **Upgrade Openfire to 3.10.3**

As part of the removal of 12Planet, we should upgrade Openfire from 3.9.1 to 3.10.3 for performance and stability improvements.

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## 5. Known Problems, Workarounds, and Additional Release Notes

This section lists any workarounds or additional release notes that have been issued for the current release. They are identified by their Release Note title. It also lists any known problems (Priority: 1-Critical), either in the current release or in previous releases, which have been deferred to an unnamed future release. These are identified by the Problem title. RODO corresponds to Omaha Database.

**Note:** The content listed under the Release Note title can be found at the following link. These are updated periodically, so please check for the latest updates to the 16.4.1 release.

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### Release Note: Omaha #5572

For users that are configuring new grib data flows there is now a grib wizard in the localization perspective that can create some of the localization configuration files for you. The wizard is opened from the Localization File Browser by right clicking on the Grib folder under EDEX and selecting New Grib Model. It is recommended that you ingest the Grib files before running the wizard so they are stored as GribModel:?:?:?. This will allow the wizard to populate the model and grid definition based of the data in the database. The wizard can export configuration files as a zip file so the contents can be manually loaded into localization or the files can be saved directly as SITE localization files. If saving as SITE the user will need to have user roles configured to allow saving to common\_static/grib and cave\_static/volumebrowser.

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### Release Note: DCS #18795

The ROC is implementing in WSR-88D Build 18 (beta/deploy July/October 2017) via CCR NA15-00151 the ability for AWIPS to issue requests to change the VCP and Enable/Disable AVSET and SAILS. Upon line connection, the RPG will send to AWIPS, message 12 which contains the list of available commands. This message will only be sent to the AWIPS that is authorized to issue these commands. AWIPS will issue VCP commands by sending Message 14 to the RPG. A radar menu item has been added called VCP Change Request that will allow authorized sites to make VCP config changes.

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### Release Note: DCS #18796

The ROC is implementing a new product (SCC) in WSR-88D Build 18 (beta/deploy July/October 2017) via CCR NA15-00153 that encapsulates WSR-88D checkpoints the National Weather Service requires be checked at least once per shift regardless of site configuration, system operation mode or meteorological conditions. The SCC provides useful information on the performance and status of the radar and provides necessary information for the WSR-88D Hotline to effectively troubleshoot issues. The SCC product will display on AWIPS as a text product (e.g. WSRSCCYYY) where YYY is the radar ID. This product will be listed on the "One Time Request" GUI, but not the "RPS List Editor" GUI. A one-time request will be issued for SCC at the top of every hour via NDM file cronOTRs.xml and will be centrally collected.



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**Release Note: DR #18797**

The ROC is removing several products from the WSR-88D baseline in Build 17 (deployment April 2016 - June 2017). The NEXRAD CCRs and products are: NA15-00045 (3-bit Z: 16, 17, 18; 4-bit Z: 21); NA15-00048 (3-bit V: 22, 23, 24); NA15-00051 (3-bit SW: 29); NA15-00054 (3-bit CR: 35); NA15-00057 (3-bit Cross Section: 85, 86); NA15-00063 (4-bit Dual Pol: 158, 160, 162, 164). On AWIPS, these resolution options will be removed from product request GUI's and other radar product configuration files. Also, in Build 18 the following will be removed: via NA16-00078 (SRR: 55), NA16-00077 (LRA: 63, 64, 89), and NA16-00086 (CR: 36). For those users who still need access to them on the WES obsolete menus have been created and can be activated as follows:

1. Open Localization Perspective and navigate to CAVE->Menus->radar.
2. Make a site-level copy of BASE base4BitProducts.xml and delete the <?ignore tag on line 766, and it's corresponding ?> tag on line 864; save/close file.
3. Make a site-level copy of BASE baseLocalRadarMenu.xml and modify to un-comment line 34; save/close file.
4. Navigate to CAVE->Menus->radar->dualPol.
5. Make a site-level copy of BASE baseRadarLegacy.xml and delete the <?ignore tag on line 1268, and it's corresponding ?> tag on line 1792; save/close file.
6. Make a site-level copy of BASE baseLocalRadarMenu.xml and modify to un-comment line 37; save/close file.
7. Navigate to CAVE->Menus->radar->klgx.
8. Make a site-level copy of BASE baseRadarLegacy.xml and delete the <?ignore tag on line 1326, and it's corresponding ?> tag on line 1880; save/close file.
9. Make a site-level copy of BASE baseLocalRadarMenu.xml and modify to un-comment line 37; save/close file.
10. Restart CAVE/D2D.

In RadarServer the obsolete products have been left in place, but commented out in radarInfo.txt, and can be un-commented as needed for use with WES, etc. Note that RadarServer radarInfo.txt is contained in the radarserver-mq.jar file found under /awips2/rcm/lib.

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**Release Note: DR 18800**

The ROC is removing the Alerting function in WSR-88D Build 18 (beta/deploy July/October 2017) via CCR NA15-00063. All NEXRAD Alerting functionality in AWIPS will be removed (i.e., editing alert grids, selecting categories to be alerted on, sending the Alert Request Message, handling alert messages/9 and the UAM/73 product). This is expected to have no impact on Alerts from AWIPS SCAN.

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**Release Note: Omaha #5664**

Grid localization files in edex\_static have been migrated to common\_static as part of a progressive consolidation of localization files to common\_static. A delta script has been provided.

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**Release Note: Omaha #5665**

Distribution pattern localization files in edex\_static have been migrated to common\_static as part of a progressive consolidation of localization files to common\_static. A delta script has been provided.

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**Release Note: Omaha #5679**

The awips database account is no longer a super user account. It no longer owns all of the awips tables. There is a new account awipsadmin that own all tables / schemas / databases that used to be owned by awips. The system will continue to use the awips account for all routine activity (inserting/updating/deleting rows).

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**Release Note: Omaha WA 19.12**

Numerous improvements and fixes to the Data Access Framework.

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**Release Note: Omaha #4716**

WA20.47 Migrate from AFOS PILS to AWIPS ID. The AFOS PIL is being deprecated. The textdb command line utility has been updated to handle 10 character awips id. The text workstation has been updated to swap the positions of the awips and afos id fields. By default the NNNXXX will now go against the awips id instead of the legacy afos id. The afos id commands will continue to work, but applications should start transitioning to using the AWIPS ID.

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**Release Note: Omaha #5637**

Apache camel upgraded to version 2.16.2.

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**Release Note: Omaha #5638**

Spring framework upgraded to version 4.2.4.

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**Release Note: Omaha #5361**

Jetty upgraded to version 9.2.14.

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**Release Note: Omaha #5654**

Apache ActiveMQ upgraded to version 5.13.0.

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**Release Note: Omaha #5067**

Jackson upgraded to version 2.6.5.

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**Release Note: Omaha #5362**

Jep upgraded to version 3.5.3.

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**Release Note: Omaha #5373**

Apache httpclient upgraded to version 4.3.6.

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**Release Note: Omaha #5376**

Apache commons collections upgraded to version 3.2.2.

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**Release Note: Omaha #5371**

Apache CXF upgraded to version 3.1.5.

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**Release Note: Omaha #5377**

Apache xmlsec upgraded to version 2.0.5, bouncycastle upgraded to version 1.54, Apache WS Security upgraded to version 2.1.4, and OpenSAML upgraded to version 3.1.1 due to CXF dependencies.

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**Release Note: Omaha #5438**

FOSS Jasypt added at version 1.9.2.

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**Release Note: DCS #19099**

FLASH products have been removed from MRMS/Precipitation Products menu.

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**Release Note: Omaha #5749**

Changed GFE text formatters to use commas instead of ellipses.

Changes that may/will affect the field:

1. PhraseBuilder.useEllipses() renamed to useCommas()
2. StringUtils.py: added punctuateList() methods which when passed a list of strings will return format the list into a comma delimited string using the Oxford comma as appropriate.
3. AreaDictionary.py, SurfAreaDictionary.py: Changed preformatted (with ellipses) ugcCityString to ugcCities containing a proper list of cities. Added wfo field to support national

TCV generation (only needed at NHCN). Ensure delta script is run if you have a site level overrides for AreaDictionary.py or SurfAreaDictionary.py. A wfo key was also added to the configured AreaDictionary entries for use in generating the National TCV at NHCN. This field is only used by NHA and is not added to the site AreaDictionary by the deltaScript. NOTE: your original AreaDictionary.py and/or SurfAreaDictionary.py files are copied to \*.orig\_ugcCity when the delta script is run. You should compare this file with the updated files and verify they are correct. NOTE that only comments prior to the definition of the AreaDictionary will be preserved. Comments within or after the AreaDictionary will not be preserved. Also any other variables defined in the file (not considered good practice) will not be preserved. Additional keys you have added to the AreaDictionary will be preserved but may not be in the same order as the original file.

---

**Release Note: Omaha #4624**

HPEDhrSrv, which is responsible for running DSPgather, has been moderately cleaned up. In the future, the DSPgather hydro apps script can be eliminated entirely because it does not currently do anything outside of logging messages (all lines that would actually execute commands are commented out in the baselined version of the script). HPEDhrSrv had been updated to perform the same actions as DSPgather a long time ago.

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**Release Note: Omaha #4625**

A Java version of DHRGather has been created. Initially, it does nothing more than log messages to the edex-ingest-mpe logs because additional upstream and downstream components will need to be converted before it is usable within the AWIPS II architecture.

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**Release Note: Omaha #5571**

A Java version of Build Hourly has been created. It runs on the same schedule as its hydroapps counterpart. It will log all activity to the new edex-ingest-mpe hydro log and it will store generated files in a completely separate directory. Essentially, it has been setup to run in parallel to allow for comparisons of the data generated by the hydro application and by the new Java application. Purge has been setup for data saved to the separate location.

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**Release Note: #5576**

A Java version of biasmesgen has been created. The application has been setup to run in parallel with the hydroapps equivalent. The Java program will write output files to a separate directory and run an automated comparison of files generated by the hydroapps application and the new Java application every hour. The files generated by the Java version will automatically be purged when the comparison has concluded. The Java application will log all activity to the new edex-ingest-mpe log.

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**Release Note: Omaha #5590, #5699**

A Java version of Roc Checker has been created. The hydroapps version of Roc Checker required command-line arguments hard-coded into one of the hydroapps shell scripts to indicate which hydro database tables to run the check against. For the Java application, the tables to check can be configured using a new localization file: RocChecker.xml. The Java version of Roc Checker has been setup to run in parallel with its hydroapps counterpart like the Java version of biasmesgen has. It will store data that is generated in a separate directory and execute an automatic comparison. The Java application will log all activity to the new edex-ingest-mpe log.

---

**Release Note: Omaha #5614**

Hydroapps applications are gradually being transitioned from a collection of C++, shell, and Fortran executables to Java applications based on the AWIPS II architecture. All Java mpe applications will log to the new awips2-edex-mpe log file. All Java applications that are written have been setup to run in parallel with the existing hydroapps applications. The Java applications will run on a somewhat similar schedule and store generated data in a separate location that parallels that hydroapps data location. The Java applications have all been setup to handle purging the additional data that they generate.

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**Release Note: DCS #19051**

Run `.deltaScripts/16.4.1/dcs19051/updateDMWTable.sh`

Enhanced the GOES-R Derived Motion Wind (DMW) plugin to take advantage of pressure level information and add flexibility to implement both GOES-R and Himawari AMVs.

Because the Himawari menu is not included by default in a baseline AWIPS II release, some site-level configuration changes need to be made in order to view the Himawari Winds in the "Satellite" menu

Copy the Himawari menu index file into the site-level localization:

Copy: `/awips2/edex/data/utility/common_static/base/menus/satellite/himawari/dmw/ahi-dmw-index.xml`

To: `/awips2/edex/data/utility/common_static/site/<your-site>/menus/satellite/himawari/dmw/ahi-dmw-index.xml`

In the newly-copied site-level config, open and edit that file, to change the default installation of the

Himawari DMW menu items from the "Himawari" menu to "Satellite" menu:

In: /awips2/edex/data/utility/common\_static/site/<your-site>/menus/satellite/himawari/dmw/ahi-dmw-index.xml

- Comment out (<!-- --> added to show comments)

```
<!-- <include installTo="menu:himawari"
      fileName="menus/satellite/himawari/dmw/ahi-dmwMenuByFilter.xml">
</include> -->
```

- And add in

```
<include installTo="menu:satellite?before=GROUP5"
fileName="menus/satellite/himawari/dmw/ahi-dmwMenuByFilter.xml" />
```

- Save the modified file, and exit

Those two steps will ensure that a menu entry for the menus/bundles/etc. provided by the Enhanced DMW plugin

will be installed to the top-level "Satellite" menu, rather than the existing (but not visible) "Himawari" menu.

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### Release Note: DCS #19064

DBGeo Plugin: Configuration file controlled capability for ingest and display of geometry data, such as active fires and hurricane intensity estimates, exploiting data which are stored directly in the Postgres database.

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### Release Note: DCS #17912

GeoJSON support in AWIPS2 enable site users to quickly capture local weather impact events and present them on CAVE as Polygons, Points and Line Strings. Two types of GeoJSON objects are going to support: A. Local weather impact events are represented by Polygons, Points, LineStrings; B. Static, even permanent map layers stored in GeoJSON format For the type A GeoJSON files,

the site users can display the GeoJSON objects on the maps via CAVE → Import → GIS Data ..., then choose GIS File (GeoJSON), browse the GeoJSON DataStore Directory, connect to it, then can select target file to display. The content will be rendered via DataStoreResource. For the type B GeoJSON, a MapDescriptor is needed to be created imilar to Shapefiles in the Maps Menu, the content will be rendered via DbPointMapResource or DbMapResource.

---

**Release Note: DR #17830**

AWIPS Reference is added to CAVE. This new plugin enables reference material for a particular product to be called up from CAVE, by right clicking on the product in the product legend. The actual reference material resides on VLab. The plugin uses keywords generated from the legend product name and the data uri to discover training. Also sent to vlab for search is the office site id, and the geographical extent of the display. These can be used to further filter reference and training material hosted and registered on VLab.

---

**Release Note: DR #19294**

Enable hiding incomplete frames in satellite imagery. Some satellite data is ingest in tiles. Therefore the display can contain holes in the data. This can be distracting to users while looping the data. This feature allow the user to elect to hide incomplete frames by right clicking on the product in the product legend and selecting Hide Incomplete Frames. The can toggle showing of incomplete frames back on by selecting the same item from the menu.

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**Release Note: DCS #18785**

The AWIPS 1 rehosted Local Storm Reports standalone application needed to be loaded with new lists of event types and sources, as well as using mixed-case instead of all caps for the cities, sources, events, etc. All of this needed to be done as a "turn-key solution," so sites may switch between the old configuration and the new one at leisure/per site or organizational requirements.

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**Release Note: DCS #17825**

Netcdf decoding for Grid, Pointset, and Goesr Satellite imagery was consolidated to simplify maintenance and provide a standard XML style. All baselined product descriptions for these three data types have been converted to the new xml format, but any existing site overrides will need to be manually updated. GOES-R Level 2 Cloud Top Height (CTH), Cloud Top Pressure (CTP), Derived Stability Indices (DSI) (CAPE, K-Index, Lifted Index, Showalter Index, Total Totals), Land Surface Temperature (LST), Total Precipitable Water (TPW), Legacy Vertical



Temperature Profile (VTP), Legacy Vertical Moisture Profile (VMP) no longer displays due to an incorrect sign on the scale\_factor attribute of the source data.

---

**Release Note: DR #19248**

GFE - runProcedure.py fails after Jep 3.5 upgrade -- Description

The runProcedure.py command fails after the Jep 3.5 upgrade with the error below:

```
<type 'exceptions.ImportError'>: No module named Systemjep.JepException: <type  
'exceptions.ImportError'>: No module named System
```

```
at /awips2/GFESuite/bin/src/runprocedure/runProcedure.<module>(runProcedure.py:40)
```

From Nate Jensen:

runProcedure.py bad/current code:

```
from java.lang.System import getProperty
```

```
stuff in between
```

```
if userName is None:
```

```
userName = getProperty("user.name")
```

runProcedure.py good/new code:

```
from java.lang import System
```

```
stuff in between
```

```
if userName is None:
```

```
userName = System.getProperty("user.name")
```

The problem may affect localapps so the issue should be noted in the living release notes for 16.4.1. This issue was found while smoke testing 16.4.1 BOIVerify.

Need to change products like WRKREFTEL to REFWRKTEL.

New User Roles to assign ... use AWIPS User Administration tool

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**Release Note: DCS #18590**

NWPS: Baseline all coastal domains -- GFE Doesn't start due to Wave10 and Period10

NIC TT#: <https://collaborate.nws.noaa.gov/trac/nwsscp/ticket/1249#comment:12>

(Has been fixed in NIC v4.0.2 .... so 16.4.1 will require NIC v4.0.2 or higher to be installed)

---

**Release Note: CFR 18904**

Implement host-based malicious code detection to scan local filesystems on the LS2 and LS3 at all AWIPS sites via a root cronjob daily at 04:30Z. The installation will be done as a post-install step and has no dependency on release but is tied to 16.4.1 for tracking purposes.

There is no site interaction or action required to monitor or remediate findings from the scans as they will be monitored via remote agents using HPOM by the NCF when agent installation is deployed on the LDAD servers.

For questions or information contact your regional focal point or the AWIPS ISSO.

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**Release Note: BOU INSTALL NOTES/RELEASE INFO****ABOUT A2 BOU 16.4.1 Notes**

- The install took about 2.5 hours, with an additional 30 minutes to troubleshoot an GFE ifpServer issue.
- The CWSU Update and Security Patch was successful and update took another 120 minutes to complete.

**GOOD TO KNOW ITEMS**

- GFE SMART INITIS: SITES NEED TO UPGRADE THEIR GFE NIC version to 4.0.2 or above (preferably 4.1)
- Due to an issue with Wave10 and Period10, GFE will not start with NIC version 4.0.1 and earlier.
- CAVE/D2D: PERSPECTIVE TABS MOVED : The Perspective List buttons have been moved to the upper right from the upper left. This was done to trim a little unused space in the CAVE toolbar.
- Once a perspective has been opened it will be listed in the upper right. You can right click and select Close to close a perspective.
- Users can also open a perspective from the Cave -> Perspective ->Perspective item.
- TEXT WINDOW CHANGE : When opening text products via the text browser, the position of the AFOS Command and AWIPS ID entry boxes were switched.
- This change was HQ/Raytheon's first steps in removing AFOS IDs from AWIPS.
- The AWIPS ID entry and AFOS ID entry existed before 16.4.1, but the location of the entry box were switched in this release.
- To use the AWIPS ID, you would enter KXXXCCNNN, or KBOUZFPBOU
- The textdb -r and textdb -w utility was updated to account for the 10 character awips id.

**Raytheon Notes:**

- Migrate from AFOS PILS to AWIPS ID. The AFOS PIL is being deprecated.
- The textdb command line utility has been updated to handle 10 character awips id.
- The text workstation has been updated to swap the positions of the awips and afos id fields.
- By default the NNNXXX will now go against the awips id instead of the legacy afos id.
- The afos id commands will continue to work, but applications should start transitioning to using the AWIPS ID.
- EDEX\_STATIC Distribution pattern localization files migrated to common\_static

- Distribution pattern localization files in edex\_static have been migrated to common\_static as part of a progressive consolidation of localization files to common\_static.
- The installation scripts will copy the appropriate files automatically.
- EDEX\_STATIC Grid Distribution localization files migrate to common\_static.
- Grid localization files in edex\_static have been migrated to common\_static as part of a progressive consolidation of localization files to common\_static.
- The installation scripts will copy the appropriate files automatically.
- LSR GUI Changes ~ BUG/DR: Standalone application loaded with new lists of event types. Several previous Events were excluded. A TT/DR has been opened to resolve this.
- LSR GUI Changes/Bug/DR: "No Snow, Just Heavy Snow", "Winter Storm" and "Winter Weather" Non Tstm Wind Gust replaced with High Wind
- Many sites have switched to using IRIS as a replacement for the LSR.
- We may be able to play with this approach in the future.
- CWSU A2 16.4.1 Thin Client update was successful.
- Both A2 16.4.1 upgrade and security patches were successfully upgraded at ZDV.
- An issue with the sec\_patch.sh script prevented the nvidia drivers from automatically updating after the Kernel updates. This issue was noted and resolved. This issue actually impacted all workstations.
- To Update Software and Security Updates - Follow procedures for the CWSU A2 Build upgrade instructions
- All ARD repo's should point to px1f. If errors display (data/fxa) then refer to A2 ARD yum repo's, cwsu offices can download a baseline set of yum repo's that will work out of the box. Click here and use your email credentials.
  
- Additional Thin Client information (including baseline CWSU/ARD yum repos can be found in the A2 ThinClient VLAB
  
- Changed GFE text formatters to use commas instead of ellipses.
  
- Changes that may/will affect the field:

1. PhraseBuilder.useEllipses() renamed to useCommas()
2. StringUtils.py: added punctuateList() methods which when passed a list of strings will return format the list into a comma delimited string using the Oxford comma as appropriate.
3. AreaDictionary.py, SurfAreaDictionary.py: Changed preformatted (with ellipses) ugcCityString to ugcCities containing a proper list of cities. Added wfo field to support national TCV generation (only needed at NHCN).
  - Ensure delta script is run if you have a site level overrides for AreaDictionary.py or SurfAreaDictionary.py.
  - A wfo key was also added to the configured AreaDictionary entries for use in generating the National TCV at NHCN. This field is only used by NHA and is not added to the site AreaDictionary by the deltaScript.
  - NOTE: your original AreaDictionary.py and/or SurfAreaDictionary.py files are copied to \*.orig\_ugcCity when the delta script is run.
  - You should compare this file with the updated files and verify they are correct. NOTE that only comments prior to the definition of the AreaDictionary will be preserved.
  - Comments within or after the AreaDictionary will not be preserved. Also any other variables defined in the file (not considered good practice) will not be preserved.
  - Additional keys you have added to the AreaDictionary will be preserved but may not be in the same order as the original file.
  - New version of FXC/Annotation is compatible with 16.4.1 (16.2.2+)
  - GSD updated their code. Download link should be available soon.

#### OPEN ISSUES/NOTES:

- GFE Display Mode - Randomly not working for many users
- Short term resolution - Purge users caveData and restart. However, the issue has been noted to return.
- Raytheon has a DR open and hopes to resolve this issue in a future 16.4.1 build.
- LSR GUI missing a number of Events. Added events not compatible with NWSChat.
- TT Open.
- uEngine issues - getPoint.py getGrid.py not working. uEngine is expected to retire with A2 build 17.1, but does not appear to be working properly for A2 16.4.1.
- Sites are expected to update to transition from the uEngine to DAF.
- SERVICE BACKUP BASIC SERVICES appear to work out of the box.
- Able to export Configuration data to Central Region
- Service Backup for PUB started with Fcst Data populated
- Was able to manipulate data
- Open Perspective bar does not seem to work in Service Backup mode.○  
May be an issue for long duration
- ASYNC/SAIDS Services started out of the box. No issues noted.
- No Issues noted with BMH

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**env variable token pguser setting in Apps\_default file for RFC**

pguser should NOT be set to awipsadmin in hydro .Apps\_defaults file. Hydro application should set the env variable token pguser=pguser in their Apps\_default file starting with 16.4.1 build.

---

**DR #19556/Omaha #6004**

Collaboration automatically docks when switching perspectives:

The current behavior is intentional. From the point of view of the Eclipse API the window containing the collaboration views is a part of the perspective, when the perspective is changed the windows are closed. In Collaboration we are reopening the view as a part of the new perspective but within RCP, each perspective is responsible for placing the view independent of other perspectives...so it is reopened in the default location. This behavior is different from the way Collaboration worked on older versions of Eclipse. In older versions of Eclipse, it was impossible to create a window with an independent shell that was managed by the perspective. To get around this we had to create and manage the window ourselves, so the perspective did not know about our window. As a side effect of this change, the window would remain open across perspective. The new version of the Eclipse makes it impossible to manage a view in window that is outside the model so this hack is no longer possible.

There is new API in eclipse 4 for making a window that exists outside the perspective but still within the model. Using this feature we can get the behavior the forecaster wants. The problem is that this new feature is immature and there are many bugs that it exposes. To fix this with much lower risk, a newer Eclipse is needed (task #5958 scheduled for 17.3.1).

The workaround is to detach the Collaboration view when a new perspective is opened. Once this is done, CAVE will remember the location of the Collaboration view when switching between perspectives.

---

**DR 19144, 19456, 19506**

Release OB16.4.1 contains minor changes related to WarnGen mixed case products. Some mixed case typographic errors in site level WarnGen templates need to be corrected. The template files can be accessed using the CAVE localization perspective in the File Browser under D2D and WarnGen. The following mixed case typographical errors need to be fixed in site level WarnGen templates:

- File impactSevereWeatherStatement.vm in the "wind still a threat" section (near line 275), the text "ever" need to be changed to "severe". In the "historyWindCTA" section (near line 1115), the phrase "Seek shelter now" need to be changed to upper case "SEEK SHELTER NOW".
- If WIND HAIL tags are used in the traditional (non impact) marine products, the following two changes are needed. File specialMarineWarning.vm in the "WIND HAIL tag" section (near line 210), the text "kts" and "in" need to be changed to "KTS" and "IN". File specialMarineWarningFollowup.vm in the "WIND HAIL tag" section (near line 433), the text

"kts" and "in" need to be changed to "KTS" and "IN". The impact marine templates have the correct upper case "KTS" and "IN" text.

- (Alaska Region only) File nonConvectiveFlashFloodWarning.vm: in the "hycType first bullet" section (near line 173), the text "ON THE" needs to be changed to "on the".

Workstation PRACTICE MODE should be used to test each WarnGen product. Verify that the correct mixed case text is provided for the full life cycle (NEW, CON, CAN and EXP) for every WarnGen product issued by the office. After the OB16.4.1 WarnGen post install is completed, the following page should be consulted for full WarnGen mixed case migration instructions: <https://collaborate.nws.noaa.gov/trac/siteconfig/wiki/MixedCaseMigration>.



## Appendix A. XML/base, WarnGen Template and RPM Changes in OB 16.4.1

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### XML/base and WarnGen Template changes

The following link lists the XML/base and WarnGen Template changes.

cave/com.raytheon.viz.radar/localization/bundles/DefaultRadarFourPanel.xml

cave/com.raytheon.viz.radar/localization/menus/radar/baseRadarObsolete.xml

cave/com.raytheon.viz.radar/localization/menus/radar/dualPol/baseRadarObsolete.xml

cave/com.raytheon.viz.radar/localization/menus/radar/klgx/baseRadarObsolete.xml

common/gov.noaa.nws.obs.common.dataplugin.geodata/utility/common\_static/base/bundles/DefaultGeoData.xml

common/gov.noaa.nws.obs.common.dataplugin.geodata/utility/common\_static/base/menus/geodata/baseGeoData.xml

common/gov.noaa.nws.obs.common.dataplugin.geodata/utility/common\_static/base/menus/geodata/geodata-index.xml

common/gov.noaa.nws.obs.common.dataplugin.geodata/utility/common\_static/base/styleRules/JASONWaveheightGeometryStyleRules.xml

common/gov.noaa.nws.obs.common.dataplugin.geodata/utility/common\_static/base/styleRules/VIIIRSActiveFiresGeometryStyleRules.xml

edex/com.raytheon.uf.edex.datadelivery.retrieval.dist/utility/common\_static/base/distribution/dataDeliveryRetrieval.xml

edex/com.raytheon.uf.edex.datadelivery.retrieval/utility/common\_static/base/datadelivery/mappings/GOESDataNameMappings.xml

edex/com.raytheon.uf.edex.datadelivery.retrieval/utility/common\_static/base/datadelivery/mappings/GOESParameterExclusions.xml

edex/com.raytheon.uf.edex.datadelivery.retrieval/utility/common\_static/base/datadelivery/mappings/GOESResolutionMappings.xml

edex/com.raytheon.uf.edex.datadelivery.retrieval/utility/common\_static/base/datadelivery/mappings/GOESatelliteMappings.xml

edex/com.raytheon.uf.edex.plugin.madis.datadelivery.ogc/utility/common\_static/base/distribution/madis.xml

edex/deploy.edex-BMH/esb/conf/db/hibernateConfig/bmh/hibernate.admin.cfg.xml

edex/deploy.edex-BMH/esb/conf/db/hibernateConfig/bmh\_practice/hibernate.admin.cfg.xml

edex/edu.wisc.ssec.cimss.edex.plugin.convectprob/utility/common\_static/base/distribution/convectprob.xml

edex/gov.noaa.nws.ncep.edex.plugin.airep/utility/common\_static/base/distribution/airep.xml

edex/gov.noaa.nws.ncep.edex.plugin.airmet/utility/common\_static/base/distribution/airmet.xml

edex/gov.noaa.nws.ncep.edex.plugin.atcf/utility/common\_static/base/distribution/atcf.xml

edex/gov.noaa.nws.ncep.edex.plugin.aww/utility/common\_static/base/distribution/aww.xml

edex/gov.noaa.nws.ncep.edex.plugin.convsigmet/utility/common\_static/base/distribution/convsigmet.xml  
edex/gov.noaa.nws.ncep.edex.plugin.ffg/utility/common\_static/base/distribution/ffg.xml  
edex/gov.noaa.nws.ncep.edex.plugin.geomag/utility/common\_static/base/distribution/geomag.xml  
edex/gov.noaa.nws.ncep.edex.plugin.ghcd/utility/common\_static/base/distribution/ghcd.xml  
edex/gov.noaa.nws.ncep.edex.plugin.idft/utility/common\_static/base/distribution/idft.xml  
edex/gov.noaa.nws.ncep.edex.plugin.intlsigmet/utility/common\_static/base/distribution/intlsigmet.xml  
edex/gov.noaa.nws.ncep.edex.plugin.mcidas/utility/common\_static/base/distribution/mcidas.xml  
edex/gov.noaa.nws.ncep.edex.plugin.modis/utility/common\_static/base/distribution/modis.xml  
edex/gov.noaa.nws.ncep.edex.plugin.mosaic/utility/common\_static/base/distribution/mosaic.xml  
edex/gov.noaa.nws.ncep.edex.plugin.ncpafm/utility/common\_static/base/distribution/ncpafm.xml  
edex/gov.noaa.nws.ncep.edex.plugin.ncscat/utility/common\_static/base/distribution/ncscat.xml  
edex/gov.noaa.nws.ncep.edex.plugin.nctaf/utility/common\_static/base/distribution/nctaf.xml  
edex/gov.noaa.nws.ncep.edex.plugin.nctext/utility/common\_static/base/distribution/nctext.xml  
edex/gov.noaa.nws.ncep.edex.plugin.ncuair/utility/common\_static/base/distribution/ncuair.xml  
edex/gov.noaa.nws.ncep.edex.plugin.nonconvsigmet/utility/common\_static/base/distribution/nonconvsigmet.xml  
edex/gov.noaa.nws.ncep.edex.plugin.ntrans/utility/common\_static/base/distribution/ntrans.xml  
edex/gov.noaa.nws.ncep.edex.plugin.pgen/utility/common\_static/base/distribution/pgen.xml  
edex/gov.noaa.nws.ncep.edex.plugin.pirep/utility/common\_static/base/distribution/pirep.xml  
edex/gov.noaa.nws.ncep.edex.plugin.sgwh/utility/common\_static/base/distribution/sgwh.xml  
edex/gov.noaa.nws.ncep.edex.plugin.sgwhv/utility/common\_static/base/distribution/sgwhv.xml  
edex/gov.noaa.nws.ncep.edex.plugin.solarimage/utility/common\_static/base/distribution/solarimage.xml  
edex/gov.noaa.nws.ncep.edex.plugin.ssha/utility/common\_static/base/distribution/ssha.xml  
edex/gov.noaa.nws.ncep.edex.plugin.stormtrack/utility/common\_static/base/distribution/stormtrack.xml  
edex/gov.noaa.nws.ncep.edex.plugin.tcm/utility/common\_static/base/distribution/tcm.xml  
edex/gov.noaa.nws.ncep.edex.plugin.wcp/utility/common\_static/base/distribution/wcp.xml  
edex/gov.noaa.nws.obs.edex.plugin.geodata/utility/common\_static/base/dbgeo/descriptions/JASON\_Waveheight.xml  
edex/gov.noaa.nws.obs.edex.plugin.geodata/utility/common\_static/base/dbgeo/descriptions/VIIRS\_Active\_Fires.xml  
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edexOsgi/com.raytheon.uf.edex.plugin.goesr/utility/common\_static/base/satellite/goesr/descriptions/Sectorized\_CMI/Himawari-Sectors.xml

edexOsgi/com.raytheon.uf.edex.plugin.grid.netcdf/utility/common\_static/base/grid/netcdf/pgblended/pgblended.xml

edexOsgi/com.raytheon.uf.edex.plugin.grid/utility/common\_static/base/purge/gridPurgeRules.xml

edexOsgi/com.raytheon.uf.edex.plugin.nwsauth/utility/common\_static/base/roles/userRoles.xml

edexOsgi/com.raytheon.uf.edex.plugin.pointset.netcdf/utility/common\_static/base/pointset/netcdf/satellite\_amsr2.xml

edexOsgi/com.raytheon.uf.edex.plugin.pointset.netcdf/utility/common\_static/base/pointset/netcdf/satellite\_sar.xml