

**AWIPS Software Maintenance and Support (SMS)**

**AWIPS-II GOES-R Test Case**

**May 2014 Test (Test 2)**

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Work Assignment 13.3

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### Revision History

This revision history is updated each time this document is updated. The history identifies the version number, the date the version was completed, the author of the changes, and a brief description of the changes.

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| 11 Dec 2013 | 1.0 | Initial Version Test 1 | J. Diaz | <name> |
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1. Scope

The objective of the second phase of AWIPS-II development and testing for GOES-R Readiness is to demonstrate the AWIPS II capabilities to concurrently receive/ingest, process and display data from a SBN feed, simulated GOES-R and GOES-S ABI Sectorized Cloud and Moisture Imagery provided by the RaFTR-CIMSS-SIM capability.

1. APPLICABLE DOCUMENTS
   1. Source Documents

* None
  1. Reference Documents
* Existing AWIPS I and AWIPS II test procedures
* GOES-R Series Ground Segment (GS) Project Functional Performance Specification (F&PS), Attachment 2 (G416-R-FPS-0089 v3.3), dtd 14 Dec 2012
* AWIPS-II GOES-R Test Case, dtd 11 Dec 2013

1. Test Case description

|  |  |  |  |
| --- | --- | --- | --- |
| **GOES-R Test Case 2** |  |  |  |
| **Test Case Engineer** | J. Diaz | **Test Platform Used** |  |
| **Date Test Case Created** | 7 Apr 2014 | **Release Version** |  |
| **CI** |  | **Logged in User’s Role** |  |
| **Site Specific** |  | **Start Date / Time** |  |
| **TC Updated for Version** |  | **Completion Date/Time** |  |
| **Last Modified By** |  | **Total Test Time** |  |
| **Executable Steps** | 234 | **Pass/Fail/Pending** |  |

* 1. Assumptions, Constraints, Limitations and Preconditions
* Constraint: An AWIPS-II operationally-representative clustered environment shall be available for conducting this test (Requirement 2856).
* Constraint: AWIPS-II Build 14.3.1 or greater is installed.
* Constraint: Since AWIPS-II Build 14.3.1 is not baselined with GOES-R, the *goesr* plugin must be deployed/installed on the test system prior to the start of testing.
* Constraint: Since the goesr plugin is not able to modify the baselined satellite files, these files must be replaced by GOES-R Test Satellite files (to be provided). Specific files affected by this constraint are as follows:
  + - GOES-R Purge Rules
    - GOES-R Menu Items
* Constraint: RaFTR data flow will be used to provide simulated GOES-R and GOES-S ABI Sectorized Cloud and Moisture Imagery until the GOES-R data flow is operational.
* Constraint: The RaFTR will be capable of providing data consistent with GOES-East and GOES-West satellite operation will be available for the following GOES-R channels.
* Precondition: CAVE and EDEX are running.
* Precondition: RaFTR data has been ingesting for 24 hours.
* Precondition: The RaFTR is capable of providing data in the following operation modes (Requirement 2815):
  + - Scan Mode (Mode 4) and Flex Mode (Mode 3) for GOES East and GOES West.
    - Scan Mode (Mode 4) and Flex Mode (Mode 4) for GOES East and GOES West.
    - Scan Mode (Mode 3) and Flex Mode (Mode 3) for GOES East and GOES West.
    - Scan Mode (Mode 3) and Flex Mode (Mode 4) for GOES East and GOES West.
* Precondition: Both the baseline and the test Performance metrics should be collected over the same full 24 hour period.
* Assumption: Performance Metrics data from a baseline build has been collected prior to the test.
* Assumption: sql queries contained in this test procedure were written specifically for GOES-16. Since the RaFTR will be providing GOES East and GOES West data, the sql queries contained in this test procedure will need to be modified for GOES-17 as needed in the respective test steps.
* Assumption: Although the requirements call for testing using “standard” available map projections, one of the key benefits of AWIPS II is that the user is able to modify the viewed projections “on-the-fly”. As such, the procedures are written using some previously developed GOESR projections, primarily to ensure that data specific to a particular region, i.e., Alaska, Hawaii and Puerto Rico would be more readily visible. However, with that in mind, the tester is able to modify the steps as necessary to view the data in a more appropriate projection and is not limited only to GOESR projections.
* Limitation: Training Network Control Facility (TNCF) portion of requirements will not be demonstrated.
  1. REQUIREMENTS
* The requirements associated with the GOES-R Test-2 test case are listed in Section 5.0
* Test procedures contained in Section 4.0 describe the steps that will be taken during the AWIPS II test to verify achievement of the GOES-R requirement goals listed below:
  + - Ingest
    - Decode
    - Store/Retain
    - Display
    - Purge
    - Performance
  1. TEST TOOLS

The following scripts or configuration files should be available in a readily-accessible location prior to test start:

|  |  |
| --- | --- |
| * getStats.sh: | Performance Metrics collection |
| * GOESR-Scales.tgz: | Map scale localization configuration files need to be extracted and placed into the localization perspective under D2D/MapScales. Make sure to copy the *scalesInfo.xml* file last. |

* 1. TEST ENVIRONMENT PREPARATION
* Prior to starting the test, the map scale localization configuration files need to be extracted from the GOESR-Scales.tgz file and placed into the D2D/MapScales folder in the Localization Perspective.
* Prior to starting the test, the GOES-R Purge Rules and GOES-R Menu files provided in the <*exact name for Satellite Test File set is TBD*> must be copied over the baseline satellite files in the localization perspective.
  1. Test Inputs
* Data consistent with GOES-East and GOES-West satellite operation will be available for the following GOES-R channels:
  + - CH-01: 0.47um
    - CH-02: 0.64um
    - CH-03: 0.87um
    - CH-04: 1.38um
    - CH-05: 1.61um
    - CH-06: 2.25um
    - CH-07: 3.90um
    - CH-08: 6.19um
    - CH-09: 6.95um
    - CH-10: 7.34um
    - CH-11: 8.50um
    - CH-12: 9.61um
    - CH-13: 10.35um
    - CH-14: 11.20um
    - CH-15: 12.30um
    - CH-16: 13.30um
  1. Test Outputs
* The results outlined in Section 4.0 are met.

1. Test Scenario

This section contains the test scenario procedures for this test case. The full list of requirements is provided in Section 5.0, Requirements Traceability Verification Matrix.

**Table 1 - Test Steps and Expected Results**

| Step # | Actions / Inputs | Expected Results | | | P/F | Comments |
| --- | --- | --- | --- | --- | --- | --- |
| Pre-Test Preparations and Checks  This test is being performed on an operationally-representative clustered environment system. As such, Requirement 2856 will be met upon successful completion of this test.  2856. Demonstration AWIPS-II Configuration. Demonstration should be performed on an operationally representative clustered environment.  This test procedure should be run four times as defined by the four scenarios contained in Requirement 2815.  2815 The RaFTR/TNCF/AWIPS-II will run flowing GOES East and West data for at least 24 consecutive hours in the following scenarios :  a. GOES West Scan Mode (Mode 4) and GOES East Flex Mode (Mode 3)  b. GOES West Scan Mode (Mode 4) and GOES East Scan Mode (Mode 4)  c. GOES West Flex Mode (Mode 3) and GOES East Flex Mode (Mode 3)  d. GOES West Flex Mode (Mode 3) and GOES East Scan Mode (Mode 4) | | | | | | |
|  | Start CAVE and select the Map Scale dropdown menu |  | | |  |  |
| Expected Result:  If the GOES-R Map Scales are displayed as shown to the right, proceed to **Step 3**, otherwise continue to **Step 2**. |
|  | Execute this step only if the GOES-R Map Scales are not displayed as expected at Step 1:   * Extract the contents of the *GOESR-Scales.tgz* file to a temporary location. * Copy all files except the *scalesInfo.xml* into the D2D/Map Scales folder in the Localization Perspective. * Once the GOES-R Map Scale files are copied, then copy the *scalesInfo.xml* file into the D2D/Map Scales folder. | | | | | |
|  | Ensure the RaFTR/TNCF/AWIPS-II is flowing GOES West Scan Mode (Mode 4) and GOES East Flex Mode (Mode 3) data to the system. | | | |  | Requirement 2815 |
| Expected Result:  GOES West Scan Mode (Mode 4) and GOES East Flex Mode (Mode 3) data is flowing to the system. | | | |
|  | Ensure the ***RaFTR/TNCF/AWIPS-II*** has been flowing data to the system for **24** hours. | | | |  | Requirement 2815 |
| Expected Result:  The system has been processing data for 24 hours. | | | |
|  | Create a new Editor Display having 96 frames per the following actions in CAVE:   * *Clear the main pane* * *CAVE 🡪 Export 🡪 Editor Display…* * *In the dialog,, name the file ‘goesR\_96frame.xml’ and click [OK] to save it to a known location (i.e., home directory)* * *Open the file using a text editor (i.e., vi)* * *Locate the line with “<numberOfFrames> and replace the value ‘12’ with ‘96’* * *Save the file* | | | |  | This Editor Display file will be used to test Requirements 2809, 2810, and 3014 |
| Expected Result:   * *The Editor Display xml file is created* | | | |
| This section demonstrates the successful ingesting and initial processing of GOES-R imagery data to partially verify the following requirements:  2809. EDEX Features. Demonstrate EDEX decode/store/retention/purge of the RaFTR stream.  2810. AWIPS performance. Ascertain and characterize the capability of the AWIPS software and development/test configuration to keep up with RaFTR's realtime transmission of the full GS-F&PS Appendix E data flow loading. Any chokepoints and/or bottlenecks shall be identified. This includes all of the AWIPS II functionality: ingest, decode, store, retain, display, and purge. | | | | | | |
| NOTE: The sql commands contained in this test procedure were written only for GOES-16 data. Since the RaFTR will simulate both GOES-East and GOES-West data for this test, the sql commands steps will need to be repeated after being modified for GOES-17. | | | | | | |
|  | In **pgadmin** open the appropriate server. | The server is opened showing a list of available databases. | | |  |  |
|  | View the list of available databases and find and click on the **metadata** database | The **metadata** database is available and selected. | | |  |  |
|  | In the pgadmin menu bar click on the SQL icon. | A query dialog is opened | | |  |  |
|  | This step needs to be executed for both GOES-16 and GOES-17  In the query dialog execute the following sql command to see which GOES data sectors/channels are available:  *select distinct creatingentity, sectorid, physicalelement from satellite where creatingentity like 'GOES-16'* | | | |  | Requirement 2809, 2810 |
| Expected Result:  The list of available products similar to that provided below is displayed | | | |
|  | In CAVE select   * *CAVE 🡪 Satellite 🡪 <path & item/location TBD>* | | | |  | Requirement 2809, 2810 |
| Expected Result:  Results have the following form (this is only a sample list and does not reflect all possible or available sectors and channels:   |  | | --- | | Add screenshot of GOES-R satellitemenu | | | | | | |
|  | Verify that the different GOES-R data products listed in Step 10 are consistent with Step 9 query results | The browser list matches the query results | | |  | Requirement 2809, 2810 |
|  | In CAVE select   * *CAVE 🡪 Data Browsers 🡪 Product Browser 🡪 Satellite 🡪 GOES* | | | |  | Requirement 2809, 2810 |
| Expected Result:  Results have the following form (this is only a sample list and does not reflect all possible or available sectors and channels:   |  |  |  | | --- | --- | --- | | All Sectors Listed |  | WCONUS Sector Channels |   or | | | | | |
|  | Verify that the different GOES-R data products listed in Step 12 are consistent with Step 9 query results | The browser list matches the query results | | |  | Requirement 2809, 2810 |
|  | This step needs to be executed for both GOES-16 and GOES-17  In pgadmin execute the following sql command to identify the oldest available processed GOES-R files. Export the resulting file to a location for later review.  *select distinct count(distinct reftime), min(distinct reftime),creatingentity, sectorid, physicalelement from satellite where creatingentity like 'GOES-16' group by creatingentity, sectorid, physicalelement order by sectorid* | | | |  | Requirement 2809, 2810 |
| Expected Result:  Record the filename and date/time stamp:  GOES-16: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  GOES-17: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
|  | In two terminal windows, ssh into dx3 and dx4. EDEX log files are captured on both boxes.   * *ssh awips@dx3-<serverID> (or dx4-)* | The user is logged into the nodes. | | |  |  |
| **NOTE**: AWIPS II logs data on either or both dx3 and dx4, so expected messages may be found on either or both nodes. | | | |
|  | Change to the edex logs directory   * *cd /awips2/edex/logs* | The working directory is changed to the location of the log files. | | |  |  |
|  | Search the <dx3 and dx4 ingest logs> for the desired sectorID name (i.e., AKREGI, WFD, etc.) entries showing that data has been processed. | | | |  | Requirement 2809, 2810 |
| Expected Result:  Entries indicate successful purging of GOES-R data have the following form:  *INFO yyyy-mm-dd hh:mm:ss,nnn [Purge-SATELLITE-Thread] PurgeLogger: EDEX - SATELLITE::Purged xx items for key [sectorID=AKREGI][physicalElement=CH-4-1.38um]* | | | |
| This section demonstrates the successful display of GOES-R imagery data as detailed by the following set of requirements. This section includes demonstration of the following requirements:  2807. ABI Channels 1-5. Process/display enhanced spatial resolution RaFTR data from at least simulated ABI Channels 1-5. Rationale: These bands are 4 and 16 times the spatial resolution of the bands tested in Demo #1. Evaluate performance impact of the enhanced spatial resolution.  2808. Full Resolution Fixed Disk. Process Fixed Grid, Full Disk, Full Resolution RaFTR data (GOES East and West) and display in standard CAVE Map projections.  2814. Display Loading. AWIPS-II concurrent display capabilities (see Section 5.0 RVTM for details).  2815 24 Hour Product Flow. The RaFTR/TNCF/AWIPS-II will run flowing GOES East and West data for at least 24 consecutive hours (see Section 5.0 RVTM for details).  2816 Channel Differencing. Provide capability for ABI channel differencing, e.g. 11.2um–3.9um  2985. D2D selection menus. Be able to display any GOES-R ABI data on D2D via selection on satellite menu. | | | | | | |
| Alaska Region | | | | | | |
|  | In CAVE set the Frames to 15 | Frames are set to 15 | | |  |  |
|  | Polar Stereographic  This step needs to be executed for both GOES-16 and GOES-17  In CAVE select   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Data Browsers 🡪 Product Browser 🡪 GOES-16🡪 AKRegi 🡪 CH-01-0.47um* | | | |  | Requirement 2807, 2808 |
| Expected Result:  *CH-01-0.47um* product displays over the Alaska region of the N. Hemisphere projection. | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to a side pane | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Polar Stereographic  In CAVE select   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 AKRegi 🡪 Band 14-15* | | | |  | Requirement 2807, 2808, 2815, 2816, 2985 |
| Expected Result:  *Band 14-15* product displays over the Alaska region of the N. Hemisphere projection | | | |
|  | Review product for correct labels/legend displays | | | |  | Requirement 2814e |
| Expected Result:  Product legends are formatted as shown: | | | |
|  | Review and sample product for consistency between the colorbar and the product | | | |  | Requirement 2814e |
| Expected Result:  Product samplings are consistent with the colorbars  Channels 1-5    Channels 6 - 16 | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | North American  In CAVE select:   * *Scale 🡪 North American* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 AKRegi 🡪 CH-06-2.25um* | | | |  | Requirement 2807, 2808, 2815, 2985 |
| Expected Result:  *CH-06-2.25um* product displays over the Alaska region of the North American projection | | | |
|  | Equidistant Cylindrical  In CAVE select *Scale 🡪 Eq Cylindrical* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * Scale is set to Eq Cylindrical * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Mercator  In CAVE select *Scale 🡪 Mercator* | | | |  | Requirement 2807, 2808  NOTE: Disregard any AlertViz error related to reprojecting when loading the Mercator map scale. This is a known issue related to the reprojecting the longitude lines for this scale. The display of the maps and products is not affected. |
| Expected Result:   * The Scale is set to the Mercator projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | AK Region (Polar Stereographic)  In CAVE select *Scale 🡪 GOESR AKRegi* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the Alaska projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | West CONUS (Lambert Conformal)  In CAVE select *Scale 🡪 GOESR WConus* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West CONUS projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | West Full Disk  In CAVE select *Scale 🡪 GOESR WFD* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West Full Disk projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Return to the N Hemisphere scale then move (swap) the product into a side pane | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2815, 2816 |
| Expected Result:   * The scale is set * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Repeat Step 22 thru Step 32 for the following AK Region channels:   * *Channel 1-0.47um* * *Channel 10-7.34um* * *Channel 03-0.87um* * *Channel-06-2.25um* | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2814e, 2815, 2816, 2985 |
| Expected Result:  The selected products are displayed in the different scales and continue looping and updating | | | |
|  | Clear the main screen and all side panes |  | | |  |  |
| Hawaii Region | | | | | | |
|  | In CAVE set the Frames to 15 | Frames are set to 15 | | |  |  |
|  | Polar Stereographic  This step needs to be executed for both GOES-16 and GOES-17  In CAVE select   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Data Browsers 🡪 Product Browser 🡪 GOES-16🡪 HIRegi 🡪 CH-02-0.64um* | | | |  |  |
| Expected Result:  *CH-02-0.64um* product displays over the Hawaii region of the N. Hemisphere projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed   The product continues looping and updating | | | |
|  | Move (swap) the product to a side pane | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Polar Stereographic  In CAVE select:   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 HIRegi 🡪 CH-02-0.64um* | | | |  | Requirement 2807, 2808, 2815, 2985 |
| Expected Result:  *CH-02-0.64um* product displays over the Hawaii region of the N. Hemisphere projection | | | |
|  | Review product for correct labels/legend displays | | | |  | Requirement 2814e |
| Expected Result:  Product legends are formatted as shown: | | | |
|  | Review and sample product for consistency between the colorbar and the product | | | |  | Requirement 2814e |
| Expected Result:  Product samplings are consistent with the colorbars  Channels 1-5    Channels 6 - 16 | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Equidistant Cylindrical  In CAVE select:   * *Scale 🡪 Eq Cylindrical* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * Scale is set to Eq Cylindrical * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Mercator  In CAVE select *Scale 🡪 Mercator* | | | |  | Requirement 2807, 2808  NOTE: Disregard any AlertViz error related to reprojecting when loading the Mercator map scale. This is a known issue related to the reprojecting the longitude lines for this scale. The display of the maps and products is not affected. |
| Expected Result:   * The Scale is set to the Mercator projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | HI Region (Mercator)  In CAVE select *Scale 🡪 GOESR HIRegi* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the Hawaii projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | West CONUS (Lambert Conformal)  In CAVE select *Scale 🡪 GOESR WConus* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West CONUS projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | West Full Disk  In CAVE select *Scale 🡪 GOESR WFD* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West Full Disk projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Return to the HI Region scale then move (swap) the product into a side pane | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2815, 2816 |
| Expected Result:   * The scale is set * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Repeat Step 39 thru Step 48 for the following HI Region channels:   * *Band 11-14 (8.5-11.2um)* * *Channel 07-3.9um* * *Channel 04-1.378um* * *Channel 15-12.3um* | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2814e, 2815, 2816, 2985 |
| Expected Result:  The selected products are displayed in the different scales and continue looping and updating | | | |
|  | Clear the main screen and all side panes |  | | |  |  |
| Puerto Rico Region | | | | | | |
|  | In CAVE set the Frames to 15 | Frames are set to 15 | | |  |  |
|  | Polar Stereographic  This step needs to be executed for both GOES-16 and GOES-17  In CAVE select   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Data Browsers 🡪 Product Browser 🡪 GOES-16🡪 PRRegi 🡪 CH-10-7.34um* | | | |  |  |
| Expected Result:  *CH-10-7.34um* product displays over the Puerto Rico region of the N. Hemisphere projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed   The product continues looping and updating | | | |
|  | Move (swap) the product to a side pane | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Polar Stereographic  In CAVE select:   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 PRRegi 🡪 CH-10-7.34um* | | | |  | Requirement 2807, 2808, 2815, 2985 |
| Expected Result:  *CH-02-0.64um* product displays over the Puerto Rico region of the N. Hemisphere projection | | | |
|  | Review product for correct labels/legend displays | | | |  | Requirement 2814e |
| Expected Result:  Product legends are formatted as shown: | | | |
|  | Review and sample product for consistency between the colorbar and the product | | | |  | Requirement 2814e |
| Expected Result:  Product samplings are consistent with the colorbars  Channels 1-5    Channels 6 - 16 | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Equidistant Cylindrical  In CAVE select:   * *Scale 🡪 Eq Cylindrical* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * Scale is set to Eq Cylindrical * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Mercator  In CAVE select *Scale 🡪 Mercator* | | | |  | Requirement 2807, 2808  NOTE: Disregard any AlertViz error related to reprojecting when loading the Mercator map scale. This is a known issue related to the reprojecting the longitude lines for this scale. The display of the maps and products is not affected. |
| Expected Result:   * The Scale is set to the Mercator projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | PR Region (Mercator)  In CAVE select *Scale 🡪 GOESR PRRegi* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the Puerto Rico projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | East CONUS (Lambert Conformal)  In CAVE select *Scale 🡪 GOESR EConus* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the East CONUS projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | West Full Disk  In CAVE select *Scale 🡪 GOESR EFD* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the East Full Disk projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Return to the HI Region scale then move (swap) the product into a side pane | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2815, 2816 |
| Expected Result:   * The scale is set * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | If data is available, repeat Step 55 thru Step 64 for the following PR Region channels:   * *Channel 03-0.87um* * *Channel-06-2.25um* * *Channel 07-3.9um* * *Channel 15-12.3um* | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2814e, 2815, 2816, 2985 |
| Expected Result:  The selected products are displayed in the different scales and continue looping and updating | | | |
|  | Clear the main screen and all side panes |  | | |  |  |
| West CONUS / East CONUS | | | | | | |
|  | In CAVE set the Frames to 15 | Frames are set to 15 | | |  |  |
|  | Lambert Conformal  This step needs to be executed for both GOES-16 and GOES-17  In CAVE select   * *Scale 🡪 CONUS* * *CAVE 🡪 Data Browsers 🡪 Product Browser 🡪 GOES-16🡪 WConus 🡪 CH-03-0.87um* | | | |  |  |
| Expected Result:  *CH-03-0.87um* product displays over the West CONUS region of the CONUS projection. | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to a side pane | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Polar Stereographic  In CAVE select   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 WConus 🡪 CH-03-0.87um* | | | |  | Requirement 2807, 2985 |
| Expected Result:  *CH-03-0.87um* product displays over the West CONUS region of the N. Hemisphere projection. | | | |
|  | Review product for correct labels/legend displays | | | |  | Requirement 2814e |
| Expected Result:  Product legends are formatted as shown: | | | |
|  | Review and sample product for consistency between the colorbar and the product | | | |  | Requirement 2814e |
| Expected Result:  Product samplings are consistent with the colorbars  Channels 1-5    Channels 6 - 16 | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Equidistant Cylindrical  In CAVE select *Scale 🡪 Eq Cylindrical* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * Scale is set to Eq Cylindrical * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Mercator  In CAVE select *Scale 🡪 Mercator* | | | |  | Requirement 2807, 2808  NOTE: Disregard any AlertViz error related to reprojecting when loading the Mercator map scale. This is a known issue related to the reprojecting the longitude lines for this scale. The display of the maps and products is not affected. |
| Expected Result:   * The Scale is set to the Mercator projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | AK Region (Polar Stereographic)  In CAVE select *Scale 🡪 GOESR AKRegi* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the Alaska projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | West CONUS (Lambert Conformal)  In CAVE select *Scale 🡪 GOESR WConus* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West CONUS projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | West Full Disk  In CAVE select *Scale 🡪 GOESR WFD* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West Full Disk projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Return to the Hi Region scale then move (swap) the product into a side pane | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2815, 2816 |
| Expected Result:   * The scale is set * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Repeat Step 71 thru Step 80 for the following West CONUS channels:   * *Channel 16-13.3um* * *Channel 05-1.61um* * *Channel 12-9.61um* * *Band 7-14 (3.9-11.2um)* | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2814e, 2815, 2816, 2985 |
| Expected Result:  The selected products are displayed in the different scales and continue looping and updating | | | |
|  | Clear the main screen and all side panes |  | | |  |  |
|  | If data is available, repeat this section for East CONUS (EConus) data. Use the PRRegi scale in lieu of AKRegi and HIRegi scales, as appropriate | No issues noted | | |  |  |
|  | Clear the main screen and all side panes |  | | |  |  |
| West Full Disk / East Full Disk | | | | | | |
|  | In CAVE set the Frames to 15 | Frames are set to 15 | | |  |  |
|  | Polar Stereographic  This step needs to be executed for both GOES-16 and GOES-17  In CAVE select   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Data Browsers 🡪 Product Browser 🡪 GOES-16🡪 WFD 🡪 CH-04-1.378um* | | | |  |  |
| Expected Result:  *CH-04-1.378um* product displays over the Pacific and CONUS | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to a side pane | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Polar Stereographic  In CAVE select   * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 WFD 🡪 CH-04-1.378um* | | | |  | Requirement 2807, 2985 |
| Expected Result:  *CH-04-1.378um* product displays over the Hawaii region of the N. Hemisphere projection | | | |
|  | Review product for correct labels/legend displays | | | |  | Requirement 2814e |
| Expected Result:  Product legends are formatted as shown: | | | |
|  | Review and sample product for consistency between the colorbar and the product | | | |  | Requirement 2814e |
| Expected Result:  Product samplings are consistent with the colorbars  Channels 1-5    Channels 6 - 16 | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Equidistant Cylindrical  In CAVE select *Scale 🡪 Eq Cylindrical* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * Scale is set to Eq Cylindrical * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Mercator  In CAVE select *Scale 🡪 Mercator* | | | |  | Requirement 2807, 2808  NOTE: Disregard any AlertViz error related to reprojecting when loading the Mercator map scale. This is a known issue related to the reprojecting the longitude lines for this scale. The display of the maps and products is not affected. |
| Expected Result:   * The Scale is set to the Mercator projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | AK Region (Polar Stereographic)  In CAVE select *Scale 🡪 GOESR AKRegi* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the Alaska projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | HI Region (Mercator)  In CAVE select *Scale 🡪 GOESR HIRegi* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the Hawaii projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | West CONUS (Lambert Conformal)  In CAVE select *Scale 🡪 GOESR WConus* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West CONUS projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | West Full Disk  In CAVE select *Scale 🡪 GOESR WFD* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West Full Disk projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Return to the West Full Disk scale then swap the product into a side pane | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The scale is set * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Repeat Step 89 thru Step 99 for the following channels:   * *Channel 14-11.2um* * *Channel 08-6.19um* * *Channel 11-8.50um* * *Band 2-5 (0.64-1.61um)* | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2814e, 2815, 2816, 2985 |
| Expected Result:  The selected products are displayed in the different scales and continue looping and updating | | | |
|  | Clear the main screen and all side panes |  | | |  |  |
|  | If data is available, repeat this section for East Full Disk (EFD) data. Use the PRRegi scale in lieu of AKRegi and HIRegi scales, as appropriate | No issues noted | | |  |  |
|  | Clear the main screen and all side panes |  | | |  |  |
| West Meso / East Meso | | | | | | |
|  | In CAVE set the Frames to 15 | Frames are set to 15 | | |  |  |
|  | Mercator  This step needs to be executed for both GOES-16 and GOES-17  In CAVE select   * *Scale 🡪 Mercator* * *CAVE 🡪 Data Browsers 🡪 Product Browser 🡪 GOES-16🡪 WMESO 🡪 CH-05-1.61um* | | | |  | NOTE: Disregard any AlertViz error related to reprojecting when loading the Mercator map scale. This is a known issue related to the reprojecting the longitude lines for this scale. The display of the maps and products is not affected. |
| Expected Result:  *CH-05-1.61um* product displays on the Mercator projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to a side pane | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Mercator  In CAVE select   * *Scale 🡪 Mercator* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 WMESO 🡪 CH-05-1.61um* | | | |  | Requirement 2807, 2808, 2985  NOTE: Disregard any AlertViz error related to reprojecting when loading the Mercator map scale. This is a known issue related to the reprojecting the longitude lines for this scale. The display of the maps and products is not affected. |
| Expected Result:   * *CH-05-1.61um* product displays in the Mercator projection * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Review product for correct labels/legend displays | | | |  | Requirement 2814e |
| Expected Result:  Product legends are formatted as shown: | | | |
|  | Review and sample product for consistency between the colorbar and the product | | | |  | Requirement 2814e |
| Expected Result:  Product samplings are consistent with the colorbars  Channels 1-5    Channels 6 - 16 | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Equidistant Cylindrical  In CAVE select *Scale 🡪 Eq Cylindrical* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * Scale is set to Eq Cylindrical * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | AK Region (Polar Stereographic)  In CAVE select *Scale 🡪 GOESR AKRegi* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the Alaska projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | HI Region (Mercator)  In CAVE select *Scale 🡪 GOESR HIRegi* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the Hawaii projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | West CONUS (Lambert Conformal)  In CAVE select *Scale 🡪 GOESR WConus* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West CONUS projection view (see below). * Frames are set to 15 * A portion of the product may be visible. If so, the product continues looping and updating | | | |
|  | West Full Disk  In CAVE select *Scale 🡪 GOESR WFD* | | | |  | Requirement 2807, 2808 |
| Expected Result:   * The Scale is set to the West Full Disk projection view (see below). * Frames are set to 15 * The product is visible and continues looping and updating | | | |
|  | Return to the West Full Disk scale then swap the product into a side pane | | | |  | Requirement 2814c, 2814d, 2815 |
| Expected Result:   * The scale is set * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | Repeat Step 108 thru Step 117 for the following channels:   * *Channel 13-10.35um* * *Channel 12-9.61um* * *Channel 09-695um* * *Band 2-3 (0.64-0.865um)* * *Band 14-8 (11.2-6.19um)* | | | |  | Requirement 2807, 2808, 2814c, 2814d, 2814e, 2815, 2816, 2985 |
| Expected Result:  The selected products are displayed in the different scales and continue looping and updating | | | |
|  | Clear the main screen and all side panes |  | | |  |  |
|  | If data is available, repeat this section for East Meso (EMESO) data. Use the PRRegi scalein lieu of AKRegi and HIRegi scales, as appropriate | No issues noted | | |  |  |
|  | Clear the main screen and all side panes |  | | |  |  |
| This section demonstrates ABI channel differencing of GOES-R imagery data as defined by the following requirement:  2816. Channel Differencing. Provide Capability for ABI channel differencing e.g. 11.2um – 3.9um. | | | | | | |
|  | Moisture: Band 14–15 (11.2 – 12.3um)  In CAVE select   * *Frames 🡪 12* * *Scale 🡪 North American* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> Band 14–15* | | | |  | Requirement 2816 |
| Expected Result:   * *Band 14–15 (11.2 – 12.3um) Moisture* product displays over the North American projection | | | |
|  | Loop the product and verify the product updates | | | |  |  |
| Expected Result:   * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 1 | | | |  |  |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating | | | |
|  | Cloud Phase: Band 11–14 (8.5 – 12.3um)  In CAVE select   * *Frames 🡪 12* * *Scale 🡪 North American* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> Band 11–14* | | | |  | Requirement 2816 |
| Expected Result:   * *Band 11–14 (8.5 – 11.2um) Cloud Phase* product displays over the North American projection | | | |
|  | Loop the product and verify the product updates | | | |  |  |
| Expected Result:   * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 2 | | | |  |  |
| Expected Result:   * The product is visible in the side pane * All products continue looping and updating | | | |
|  | Fog: Band 7–14 (3.9 – 12.3um)  In CAVE select   * *Frames 🡪 12* * *Scale 🡪 North American* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> Band 7–14* | | | |  | Requirement 2816 |
| Expected Result:   * *Band 7–14 (3.9 – 12.3um) Fog* product displays over the North American projection | | | |
|  | Loop the product and verify the product updates | | | |  |  |
| Expected Result:   * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 3 | | | |  |  |
| Expected Result:   * The product is visible in the side pane * All products continue looping and updating | | | |
|  | Snow: Band 2–5 (0.64 – 1.61um)  In CAVE select   * *Frames 🡪 12* * *Scale 🡪 North American* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> Band 2–5* | | | |  | Requirement 2816 |
| Expected Result:   * *Band 2–5 (0.64 – 1.61um) Snow* product displays over the North American projection | | | |
|  | Loop the product and verify the product updates | | | |  |  |
| Expected Result:   * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 4 | | | |  |  |
| Expected Result:   * The product is visible in the side pane * All products continue looping and updating | | | |
|  | Vegetation: Band 2–3 (0.64 – 0.865um)  In CAVE select   * *Frames 🡪 12* * *Scale 🡪 North American* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> Band 2–3* | | | |  | Requirement 2816 |
| Expected Result:   * *Band 2–3 (0.64 – 0.865um) Vegetation* product displays over the North American projection | | | |
|  | Loop the product and verify the product updates | | | |  |  |
| Expected Result:   * The product continues looping and updating | | | |
|  | Move (swap) the product to any side pane | | | |  |  |
| Expected Result:   * The Band 2–3 product is visible in the side pane * The product previously in the side pane is now displayed in the main pane * All products continue looping and updating | | | |
|  | Clear the main pane | Pane is cleared | | |  |  |
|  | Upper Level Information: Band 14–8 (11.2 – 6.19um)  In CAVE select   * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> Band 14–8* | | | |  | Requirement 2816 |
| Expected Result:   * *Band 14–8 (11.2 – 6.19um) Upper Level Information* product displays over the North American projection | | | |
|  | Loop the product and verify the product updates | | | |  |  |
| Expected Result:   * The product continues looping and updating | | | |
|  | Move (swap) the product to any side pane | | | |  |  |
| Expected Result:   * The Band 14–8 product is visible in the side pane * The product previously in the side pane is now displayed in the main pane * All products continue looping and updating | | | |
|  | Move (swap) the products displayed in the side panes to the main pane until all the products have been swapped into the main pane and back to the side panes | | | |  | Requirement 2816 |
| Expected Result:   * Products swap without issue * Products continue looping and updating * No system slowdowns or crashes occur | | | |
| This section demonstrates the ability of subsampling (decimating) ABI channel differencing of GOES-R imagery data as defined by the following requirement:  3065. Loop frame sub-sampling. Demonstrate the ability to subsample (or decimate) in time available ABI imagery data. For example, create a 64 image loop of 24 hour loop of Scan Mode (5 minute refresh) imagery, where not all available images are used. | | | | | | |
|  | In CAVE select   * *Frames 🡪 64* * *Scale 🡪 North American* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 WCONUS 🡪 CH-07-3.90um* | | | |  |  |
| Expected Result:   * *CH-07-3.90um* product displays over the North American projection (see below) * Note the Frame Count: \_\_\_\_\_\_\_ * Note the newest frame date/time stamp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Note the oldest frame date/time stamp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
|  | Swap (move the product into Side Pane 1 | | | |  |  |
| Expected Result:  The product displays in the side pane | | | |
|  | In CAVE select   * *Frames 🡪 64* * *Scale 🡪 North American* * *Options 🡪 Time Options (checkbox)* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 WCONUS 🡪 CH-07-3.90um* | | | |  |  |
| Expected Result:   * Time Options dialog (see below) opens | | | |
|  | In the Time Options dialog select [OK] to accept the default settings. | | | |  |  |
| Expected Result:   * *CH-07-3.90um* product displays over the North American projection (see Step 142) * Record the Frame Count: \_\_\_\_\_\_\_ * Record the newest frame date/time stamp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Record the oldest frame date/time stamp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
|  | Compare the results from Step 145 to those collected in Step 142 | | | |  |  |
| Expected Result:   * Frames Count: Match * Latest Timestamp: Match (see note) * Oldest Timestamp: Match (see note)   Note: Allowing for the arrival of new data which may cause differences, based on these steps being executed within moments of each other, the frame counts match and the latest and oldest date/timestamps should be within minutes if not exact. | | | |
|  | Swap (move the product into Side Pane 2 | | | |  |  |
| Expected Result:  The product displays in the side pane | | | |
|  | In CAVE select   * *Frames 🡪 64* * *Scale 🡪 North American* * *Options 🡪 Time Options (checkbox)* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 WCONUS 🡪 CH-07-3.90um* | | | |  |  |
| Expected Result:   * Time Options dialog opens | | | |
|  | In the Time Options dialog, note the Valid Times for the Default Time Resolution | | | |  |  |
| Expected Result:   * All Valid Time options are enabled | | | |
|  | In the Time Options dialog:   * Note the Valid Times for the Default Time Resolution * Time Resolution: 🡪 15 min | | | |  | Requirement 3065 |
| Expected Result:   * On average, one of every three times is now selected (see the 5min default image and the 15min image provided below):   Note: This is not a definitive result and may differ depending on how many products are available, the selections may fluctuate.    5min Default 15min | | | |
|  | In the Time Options dialog select [OK] to the selection. | | | |  | Requirement 3065 |
| Expected Result:   * *CH-07-3.90um* product displays over the North American projection (see Step 142) * Expected Frame Count: 48 * Record the Frame Count: \_\_\_\_\_\_\_ * Record the newest frame date/time stamp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Record the oldest frame date/time stamp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
|  | Compare the results to those collected in Step 142 and Step 145 | | | |  | Requirement 3065 |
| Expected Result:   * Frames Count: Less than previous * Latest Timestamp: Match (Note 1) * Oldest Timestamp: May differ (Note 2)   Note 1: Allowing for the arrival of new data which may cause differences, based on these steps being executed within moments of each other, the frame counts match and the latest.  Note 2: The oldest date/timestamps may vary depending upon which products were selected by the system during the decimation process, but should be close. | | | |
|  | Swap (move the product into Side Pane 3 | | | |  |  |
| Expected Result:  The product displays in the side pane | | | |
|  | In CAVE select   * *Frames 🡪 64* * *Scale 🡪 North American* * *Options 🡪 Time Options (checkbox)* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 WCONUS 🡪 CH-07-3.90um* | | | |  |  |
| Expected Result:   * Time Options dialog opens | | | |
|  | In the Time Options dialog:   * Note the Valid Times for the Default Time Resolution * Time Resolution: 🡪 30 min | | | |  | Requirement 3065 |
| Expected Result:   * On average, one of every six times is now selected (see the 5min default image and the 30min image provided below):   Note: This is not a definitive result and may differ depending on how many products are available, the selections may fluctuate.    5min Default 30min | | | |
|  | In the Time Options dialog select   * [OK] | | | |  | Requirement 3065 |
| Expected Result:   * *CH-07-3.90um* product displays over the North American projection (see Step 142) * Expected Frame Count: 30 * Record the actual Frame Count: \_\_\_\_\_\_\_ * Record the newest frame date/time stamp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Record the oldest frame date/time stamp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
|  | Compare the results to those collected in Step 142, Step 145 and Step 151 | | | |  | Requirement 3065 |
| Expected Result:   * Frames Count: Less than previous * Latest Timestamp: Match (Note 1) * Oldest Timestamp: May differ (Note 2)   Note 1: Allowing for the arrival of new data which may cause differences, based on these steps being executed within moments of each other, the frame counts match and the latest.  Note 2: The oldest date/timestamps may vary depending upon which products were selected by the system during the decimation process, but should be close. | | | |
|  | Clear the main pane and all side panes. | All panes are cleared | | |  |  |
| This section demonstrates the expanded color assignment table capability as defined by the following requirement:  3062. Color Table Size (prototype). Expand the AWIPS-II color assignment table to 16384 colors (14 bits). GOES-R ABI imagery will be provided with 12 and 14 bit dynamic range. AWIPS-II currently uses an 8-bit (256 color) assignment table to render imagery. There are some applications, such as visual smoke/ash detection, where operations have reported a need for full-scale color differentiation - i.e. a larger color table. | | | | | | |
| NOTE: This section is in preliminary state and is not fully developed. | | | | | | |
|  | In CAVE select   * *Scale 🡪 Eq. Cylindrical* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> 🡪 EMeso 🡪 CH-07-3.90um* | | | |  | The tester is not limited to use of EMeso data. This was selected as a matter of convenience during test case development. |
| Expected Result:   * *CH-07-3.90um* product displays | | | |
|  | Right click and hold MB3 on the product legend and select “*Edit Colors*” in the popup menu | | | The *Edit Colors* dialog displays for the default color map |  |  |
|  | In the Edit Colors dialog’s “Use color model:” field   * Click on the color quantify selection dropdown and select the “*2048 Colors*” option * Select “*Save As…*” and name the save as “GOESR\_Test2” * Click [OK] | | | |  | Requirement 3062  This section/step is in preliminary state and has not been fully developed. |
| Expected Result:   * The selection is made * Additional results TBD | | | |
|  | Zoom into an area containing yellow or blue in the product | | | |  |  |
| Expected Result:  A discernable gradiation of colors is visible as seen in the images provided below: | | | |
|  | Right click and hold MB3 on the product legend and select “*Imaging…*” in the popup menu | | | The Imaging… dialog displays |  |  |
|  | | | |
|  | In the Imaging… dialog’s second (lower) dropdown menu, select:  *Sat/IR/CIRA (IR Default) 🡪 <GOESR>🡪 <2048 Color Map>* | | | |  | Requirement 3062  This section/step is in preliminary state and has not been fully developed. |
| Expected Result:  Due to the increased number of colors, the previously discernable gradiation of colors is no longer apparent | | | |
|  | Close all dialogs and clear all panes | | |  |  |  |
| This section demonstrates concurrent ingesting, decoding, processing and display of GOES-R imagery data as defined by the following requirements:  2807. ABI Channels 1-5. Process/display enhanced spatial resolution RaFTR data from at least simulated ABI Channels 1-5. Rationale: These bands are 4 and 16 times the spatial resolution of the bands tested in Demo #1. Evaluate performance impact of the enhanced spatial resolution.  2810. AWIPS performance. Ascertain and characterize the capability of the AWIPS software and development/test configuration to keep up with RaFTR's realtime transmission of the full GS-F&PS Appendix E data flow loading. Any chokepoints and/or bottlenecks shall be identified. This includes all of the AWIPS II functionality: ingest, decode, store, retain, display, and purge.  2812. Mesoscale Loops. Be able to display a loop of at least 48 consecutive mesoscale images at a rate of at least 10 frames/second.  2814. Display Loading. AWIPS-II concurrent display capabilities (see Section 5.0 RVTM for details).  2816. Channel Differencing. Provide Capability for ABI channel differencing e.g. 11.2um – 3.9um.  2985. D2D selection menus. Be able to display any GOES-R ABI data on D2D via selection on satellite menu.  3014. 96 Full disk Images in Loop. Evaluate performance impact due to increasing imagery loop length for full disk GOES-R imagery to 96 images in loop. | | | | | | |
|  | There should be one CAVE session in progress from the previous section. If not, start CAVE session 1. Ensure that all panes are cleared. | CAVE session 1 is available. All panes are cleared. | | |  | Requirement 2814a |
|  | On a second terminal, start CAVE session 2. | CAVE session 2 is available | | |  | Requirement 2914a |
| CAVE-1 Preparation | | | | | | |
|  | CAVE 1 – Product 1  In CAVE-1 select   * *Frames 🡪 15* * *Scale 🡪 North American* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> CH-01-0.47um* | | | |  | Requirement 2807, 2985 |
| Expected Result:   * *Frames are set to 15* * *No more than 15 is displayed in Frame counter* * *CH-01-0.47um* product displays over the North American projection | | | |
|  | Loop the product and verify the product updates | | | |  |  |
| Expected Result:   * The product is visible * No more than 15 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 1 | | | |  |  |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | CAVE 1 – Product 2  In CAVE-1 select   * *Frames 🡪 24* * *Scale 🡪 Eq Cylindrical* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> CH-04-1.38um* | | | |  | Requirement 2807, 2985 |
| Expected Result:   * *Frames are set to 24* * *No more than 24 is displayed in Frame counter* * *CH-04-1.38um* product displays over the Eq Cylindrical projection | | | |
|  | Loop the product and verify the product updates | | | |  |  |
| Expected Result:   * The product is visible * No more than 24 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 2 | | | |  |  |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | CAVE 1 – Product 3  In CAVE-1 select   * *Frames 🡪 48* * *Scale 🡪 GOESR WConus* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> CH-08-6.19um* | | | |  | Requirement 2807, 2985 |
| Expected Result:   * *Frames are set to 48* * *No more than 48 is displayed in Frame counter* * *CH-08-6.19um* product displays over the GOESR WConus projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2810, 2812, 2814 |
| Expected Result:   * The product is visible * No more than 48 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 3 | | | |  | Requirement 2810, 2812, 2814 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | CAVE 1 – Product 4  In CAVE-1 select   * *Frames 🡪 64* * *Scale 🡪 GOESR AKRegi* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> Band 11-14* | | | |  | Requirement 2807, 2812, 2985 |
| Expected Result:   * *Frames are set to 64* * *No more than 64 is displayed in Frame counter* * *Channel Differencing Band 11-14 [Cloud Phase]* product displays over the GOESR WFD projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2810, 2812, 2814 |
| Expected Result:   * The product is visible * No more than 64 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 4 | | | |  | Requirement 2810, 2812, 2814 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
| CAVE 1: Requirement 3014: 96-Frame Full Disk Images | | | | | | |
|  | CAVE 1 – Product 5  Import the new Editor Display into CAVE-1:   * *CAVE 🡪 Import 🡪 Displays…* * *Locate the file ‘goesR\_96frame.xml’ and select [OK]* | | | |  | Note: This action only affects the current main plane, not the previously loaded side panes. |
| Expected Result:   * *The Editor Display loads* * *The Frames: dropdown menu shows 96* | | | |
|  | Perform the following actions in CAVE:   * *Scale 🡪 Eq. Cylindrical* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> CH-10-7.34um* | | | |  | Requirement 2807, 2810, 2812, 2816, 2985, 3014 |
| Expected Result:   * *Frames are set to 96* * *CH-10-7.34um* product displays over the Eq. Cylindrical projection * *The product displays and contains 96 frames* | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2810, 2812, 2814, 2816 |
| Expected Result:   * The product is visible * No more than 64 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to any side pane (all four side panes should be filled so it doesn’t matter which one is selected for the swap) | | | |  | Requirement 2810, 2812, 2814, 2816, 3014 |
| Expected Result:   * The product in the side pane swaps with the 96-frame product in the main pane * Both products continue looping and updating * The product returned to the main pane contains the number of frames initially loaded * The 96-frame product that moved to the side pane now contains only 8 frames | | | |
|  | Move (swap) the 96-frame product back to the main pane | | | |  | Requirement 2810, 2812, 2814, 2816, 3014 |
| Expected Result:   * The 96-frame product is in the main pane * Both products continue looping and updating * The product returned to the side pane contains only 8 frames | | | |
|  | Verify five different products are running in all five panes of the CAVE-1 session continue looping and updating | The products continue looping and updating | | |  | Requirement 2807, 2810, 2812, 2814, 2816 3014 |
| CAVE-2 Preparation | | | | | | |
|  | CAVE 2 – Product 1  In CAVE-2 select   * *Frames 🡪 15* * *Scale 🡪 N. Hemisphere* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> CH-02-0.64um* | | | |  | Requirement 2807, 2985 |
| Expected Result:   * *Frames are set to 12* * *No more than 12 is displayed in Frame counter* * *CH-02-0.64um* product displays over the N. Hemisphere projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2810, 2814 |
| Expected Result:   * The product is visible * No more than 12 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 1 | | | |  | Requirement 2810, 2814 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | CAVE 2 – Product 2  In CAVE-2 select   * *Frames 🡪 36* * *Scale 🡪 Mercator* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> CH-03-0.87um* | | | |  | Requirement 2807, 2985 |
| Expected Result:   * *Frames are set to 36* * *No more than 36 is displayed in Frame counter* * *CH-03-0.87um* product displays over the Mercator projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2810, 2814 |
| Expected Result:   * The product is visible * No more than 24 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 2 | | | |  | Requirement 2810, 2814 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | CAVE 2 – Product 3  In CAVE-2 select   * *Frames 🡪 48* * *Scale 🡪 GOESR EConus* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> CH-05-1.61um* | | | |  | Requirement 2807, 2812, 2985 |
| Expected Result:   * *Frames are set to 48* * *No more than 48 is displayed in Frame counter* * *CH-05-1.61um* product displays over the GOESR EConus projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2810, 2812, 2814 |
| Expected Result:   * The product is visible * No more than 48 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 3 | | | |  | Requirement 2810, 2812, 2814 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
|  | CAVE 2 – Product 4  In CAVE-2 select   * *Frames 🡪 64* * *Scale 🡪 GOESR HIRegi* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> Band 14-15* | | | |  | Requirement 2807, 2812, 2985 |
| Expected Result:   * *Frames are set to 64* * *No more than 64 is displayed in Frame counter* * *Channel Differencing Band 14-15 [Moisture]* product displays over the GOESR HIRegi projection | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2810, 2812, 2814 |
| Expected Result:   * The product is visible * No more than 64 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to Side Pane 4 | | | |  | Requirement 2810, 2812, 2814 |
| Expected Result:   * The product is visible in the side pane * The product continues looping and updating * No more than 8 frames are displayed in the side pane | | | |
| CAVE 2: Requirement 3014: 96-Frame Full Disk Images | | | | | | |
|  | CAVE 2 – Product 5  Import the new Editor Display into CAVE-2:   * *CAVE 🡪 Import 🡪 Displays…* * *Locate the file ‘goesR\_96frame.xml’ and select [OK]* | | | |  | Note: This action only affects the current main plane, not the previously loaded side panes. |
| Expected Result:   * *The Editor Display loads* * *The Frames: dropdown menu shows 96* | | | |
|  | Perform the following actions in CAVE:   * *Scale 🡪 Eq. Cylindrical* * *CAVE 🡪 Satellite 🡪 <path & item/location TBD> CH-12-9.61um* | | | |  | Requirement 2807, 2810, 2812, 2816, 2985, 3014 |
| Expected Result:   * *Frames are set to 96* * *CH-12-9.61um* product displays over the Eq. Cylindrical projection * *The product displays and contains 96 frames* | | | |
|  | Loop the product and verify the product updates | | | |  | Requirement 2810, 2812, 2814, 2816 |
| Expected Result:   * The product is visible * No more than 64 frames are displayed * The product continues looping and updating | | | |
|  | Move (swap) the product to any side pane (all four side panes should be filled so it doesn’t matter which one is selected for the swap) | | | |  | Requirement 2810, 2812, 2814, 2816, 3014 |
| Expected Result:   * The product in the side pane swaps with the 96-frame product in the main pane * Both products continue looping and updating * The product returned to the main pane contains the number of frames initially loaded * The 96-frame product that moved to the side pane now contains only 8 frames | | | |
|  | Move (swap) the 96-frame product back to the main pane | | | |  | Requirement 2810, 2812, 2814, 2816, 3014 |
| Expected Result:   * The 96-frame product is in the main pane * Both products continue looping and updating * The product returned to the side pane contains only 8 frames | | | |
|  | Verify five different products are running in all five panes of the CAVE-2 session continue looping and updating | The products continue looping and updating | | |  | Requirement 2807, 2810, 2812, 2814, 2816 |
| Concurrent Display and Performance | | | | | | |
|  | * Allow the CAVE-1 and CAVE-2 sessions to run for 24 hours * Monitor CAVE-1 and CAVE-2 sessions * Periodically swapping panes in both sessions.   IMPORTANT: Always return the 96-frame product to the main pane. | | | |  | Requirement 2807, 2810, 2812, 2814, 2816, 3014 |
| Expected Result:   * Products swap without issue * Products continue looping and updating * No system slowdowns or crashes occur | | | |
|  | IMPORTANT: DO NOT STOP LOOPING OF ANY PRODUCT | | | | | |
| This section demonstrates concurrent ingesting, decoding, processing, display and purge of GOES-R imagery data as defined by the following requirements:  2809. EDEX Features. Demonstrate EDEX decode/store/retention/purge of the RaFTR stream.  2810. AWIPS performance. Ascertain and characterize the capability of the AWIPS software and development/test configuration to keep up with RaFTR's realtime transmission of the full GS-F&PS Appendix E data flow loading. Any chokepoints and/or bottlenecks shall be identified. This includes all of the AWIPS II functionality: ingest, decode, store, retain, display, and purge. | | | | | | |
| NOTE: Both the baseline and the test performance metrics should be collected over a full 24 hour period, preferably starting at and covering the same period (i.e., 0600z – 0559z). | | | | | | |
|  | Verify the system has been running for 24 hours | No issues or problems were experienced, all products continued to load, process and update. | | |  |  |
|  | Open a terminal and execute the following performance metrics collection script:   * *getStats.sh* * *Follow instructions as prompted:*   *Hitting return without entering a date/time will collect the latest 24-hr period* | | | |  |  |
| Expected Result:  A list of Ingest Processing Metrics is produced for the previous 24 hours (or the period set when executing the script) | | | |
|  | Collect the following log(s) for later analysis and review:  NOTE: At this time GOES-R data is not captured in the satellite log.   * *edex-ingest-yyyymmdd.log* | | | |  |  |
| Expected Result:  Logs are collected | | | |
|  | Review/compare the Ingest Processing Metrics results against baseline performance to determine whether Satellite Ingest and Latency performance has been affected by the processing of GOES-R data | | | |  | Requirement 2809, 2810 |
| Expected Result:   * Satellite Ingest performance is consistent with the Baseline Performance results collected previously * Satellite Latency performance is consistent with the Baseline Performance results collected previously | | | |
|  | In the pgadmin menu bar click on the SQL icon. | A query dialog is opened | | |  |  |
|  | In the pgadmin query dialog execute the following sql command to collect GOES-R processing statistics from the database:  *select*  *substring(grouping from 'value=\"(.\*?)\"') as pluginName,*  *field, TO\_char(endDate, 'YYYY-MM-DD HH24') as period,*  *SUM(sum)/SUM(count) as avg,*  *max(max) as max,*  *SUM(count) as totalCount*  *from metadata.events.aggregate*  *where eventtype='com.raytheon.uf.common.stats.ProcessEvent' and*  *substring(grouping from 'value=\"(.\*?)\"') = 'goes-r'*  *group by pluginName, field, period*  *order by period DESC, field DESC, pluginName;* | | | | | |
| Expected Result:  GOES-R processing statistics are consistent with those of other satellite data processing statistics   * Results appear as shown below:   Sample Output:  *"pluginname";"field";"period";"avg";"max";"totalcount"*  *"goes-r";"processingTime";"2013-11-18 19";72.8064516129032;1434;93*  *"goes-r";"processingLatency";"2013-11-18 19";73.247311827957;1436;93*  *"goes-r";"processingTime";"2013-11-11 22";329;541;2*  *"goes-r";"processingLatency";"2013-11-11 22";556.5;995;2*  *"goes-r";"processingTime";"2013-11-08 21";104.6;547;10*  *"goes-r";"processingLatency";"2013-11-08 21";105.3;550;10* | | | |  | Requirement 2809, 2810 |
|  | If the 96-frame product is still in the main pane, swap it with any side pane. | | | |  |  |
| Expected Result:   * The product previously in the side pane is now displayed * All products continue looping and updating | | | |
|  | Full-disk GOES-R imagery at 32 images in loop.   * *Set the D2D scale to GOES-R EFD* * Set the Frames to 32 * DO NOT STOP LOOPING. * Wait 10 min then repeat Step 211 * Review the results and compare to the results collected in Step 211 | | | |  | Requirement 2809, 2810 |
| Expected Result:   * GOES-R processing statistics are consistent with those of other satellite data processing statistics * No significant degradation of performance is noted from original run | | | |
|  | Full-disk GOES-R imagery at 64 images in loop.   * Change the Frames to 64 * Start looping if not already in progress * Wait 10 min then repeat Step 211 * Review the results and compare to the results collected in Step 211 and in Step 213 | | | |  | Requirement 2809, 2810 |
| Expected Result:   * GOES-R processing statistics are consistent with those of other satellite data processing statistics * No significant degradation of performance is noted from the previous runs | | | |
|  | Move (swap) the 96-frame product back to the main pane. | | | |  |  |
| Expected Result:   * The 96-frame product is displayed in the main pane * The product is still looping and updating * The product contains 96 frames | | | |
|  | Full-disk GOES-R imagery at 96 images in loop.   * Wait 10 min then repeat Step 211 * Review the results and compare to the results collected at Step 211, Step 213 and Step 214 | | | |  | Requirement 2809, 2810 |
| Expected Result:   * GOES-R processing statistics are consistent with those of other satellite data processing statistics * No significant degradation of performance is noted from previous runs | | | |
|  | Repeat Step 211 during the ingest of a major model runs.  i.e.  GFS Model Runs at 00Z, 06Z,12Z, 18Z  e.g. The 12Z model run arrives at approximately 1630Z | | GOES-R processing statistics are consistent with those of other satellite data processing statistics | |  | Requirement 2810 |
| This section will demonstrate the purging of GOES-R imagery data to partially verify the following three requirements:  2809. EDEX Features. Demonstrate EDEX decode/store/retention/purge of the RaFTR stream.  2810. AWIPS performance. Ascertain and characterize the capability of the AWIPS software and development/test configuration to keep up with RaFTR's realtime transmission of the full GS-F&PS Appendix E data flow loading. Any chokepoints and/or bottlenecks shall be identified. This includes all of the AWIPS II functionality: ingest, decode, store, retain, display, and purge.  2811. Retain at least 24 hours of the full Appendix-E data stream. | | | | | | |
| NOTE: System should have been running, ingesting and storing GOES-R imagery data for at least 24 hours prior to executing this test to ensure collection of sufficient data has taken place. | | | | | | |
| NOTE: Purge runs on the half hour and may take at least 15 minutes to run. Thus, you may need to run the query several times to verify the GOES-R data purge. | | | | | | |
|  | In a terminal window ssh to the machine with the location of the edex log files.   * *ssh awips@dx3-<serverID> (or dx4-)* | The user is logged into the node. | | |  |  |
| **NOTE**: AWIPS II logs data on both dx3 and dx4. If the expected messages can't be found on one node check the other. | | | |
|  | Change to the edex logs directory   * *cd /awips2/edex/logs* | The working directory is changed to the location of the log files. | | |  |  |
|  | Search the <dx3 and dx4 ingest logs> for the desired sectorID name (i.e., AKREGI, WFD, etc.) entries showing that data has been processed. | | | |  |  |
| Expected Result:  Entries indicate successful purging of GOES-R data have the following form:  *INFO yyyy-mm-dd hh:mm:ss,nnn [Purge-SATELLITE-Thread] PurgeLogger: EDEX - SATELLITE::Purged xx items for key [sectorID=AKREGI][physicalElement=CH-4-1.38um]* | | | | | |
|  | Search the <dx3 and dx4 purge logs> for the desired sectorID name (i.e., AKREGI, WCONUS, etc.) and locate the purge entries. These entries will be listed under the ‘SATELLITE’ umbrella. | | | |  | Requirement 2809, 2810 |
| Expected Result:  Entries indicate successful purging of GOES-R data have the following form:  *INFO yyyy-mm-dd hh:mm:ss,nnn [Purge-SATELLITE-Thread] PurgeLogger: EDEX - SATELLITE::Purged xx items for key [sectorID=AKREGI][physicalElement=CH-4-1.38um]* | | | | | |
|  | In the pgadmin menu bar click on the SQL icon. | A query dialog is opened | | |  |  |
|  | This step needs to be executed for both GOES-16 and GOES-17  In pgadmin execute the following sql command to identify the latest processed GOES-R files. Export the resulting file to a location for later review.  *select distinct count(distinct reftime), max(distinct reftime),creatingentity, sectorid, physicalelement from satellite where creatingentity like 'GOES-16' group by creatingentity, sectorid, physicalelement order by sectorid* | | | |  | Requirement 2809, 2810 |
| Expected Result:  Note the filename and date/time stamp  *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* | | | |
|  | Compare the Step 223 query results from to the latest displayed product legends and verify the product and timestamps match. | The latest hour of GOES-R data is available. The products and /timestamps match | | |  |  |
|  | This step needs to be executed for both GOES-16 and GOES-17  In pgadmin execute the following sql command to identify the oldest available processed GOES-R files. Export the resulting file to a location for later review.  *select distinct count(distinct reftime), min(distinct reftime),creatingentity, sectorid, physicalelement from satellite where creatingentity like 'GOES-16' group by creatingentity, sectorid, physicalelement order by sectorid* | | | |  | Requirement 2809, 2810 |
| Expected Result:  Note the filename and date/time stamp  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
|  | Review the results collected at Step 225 to verify there is at least 24 hours of GOES-R data available. | | The database contains at least 24 hours of GOES-R data | |  | Requirement 2811 |
|  | Review the results collected at Step 225 to verify there is at least 24 hours of full-disk GOES-R data available. | | The database contains at least 24 hours of full-disk GOES-R data | |  | Requirement 2811 |
|  | Review the results collected at Step 225 to those previously collected at Step 14 and verify the oldest previously recorded file date/time stamps are no longer listed in the latest query. | | The oldest file previously displayed is no longer listed. | |  | Requirement 2809, 2810 |
|  | Completed test for RaFTR/TNCF/AWIPS-II configuration:   * *GOES West Scan Mode (Mode 4) and GOES East Scan Mode (Mode 3)* | | | |  | Requirement 2815a |
| Expected Result:  Successfully passes test | | | |
| Verification of GOES-R data Mode Operation | | | | | | |
| This test procedure should be run a total of four times, as defined by the four scenarios contained in Requirement 2815 unless actual GOES-R satellite is available.  2815 The RaFTR/TNCF/AWIPS-II will run flowing GOES East and West data for at least 24 consecutive hours in the following scenarios :  a. GOES West Scan Mode (Mode 4) and GOES East Flex Mode (Mode 3)  b. GOES West Scan Mode (Mode 4) and GOES East Scan Mode (Mode 4)  c. GOES West Flex Mode (Mode 3) and GOES East Flex Mode (Mode 3)  d. GOES West Flex Mode (Mode 3) and GOES East Scan Mode (Mode 4) | | | | | | |
|  | Repeat this Test Case after changing RaFTR/TNCF/AWIPS-II configuration for:   * *GOES West Scan Mode (Mode 4) and GOES East Scan Mode (Mode 4)* | | | |  | Requirement 2815b |
| Expected Result:  Successfully passes test | | | |
|  | Repeat this Test Case after changing RaFTR/TNCF/AWIPS-II configuration for:   * *GOES West Flex Mode (Mode 3) and GOES East Flex Mode (Mode 3)* | | | |  | Requirement 2815c |
| Expected Result:  Successfully passes test | | | |
|  | Repeat this Test Case after changing RaFTR/TNCF/AWIPS-II configuration for:   * *GOES West Flex Mode (Mode 3) and GOES East Flex Mode (Mode 4)* | | | |  | Requirement 2815d |
| Expected Result:  Successfully passes test | | | |
| Test Complete | | | | | | |
|  | Test Completion | | Test has successfully completed | |  | Requirement 2815, 2856 |
| Clean-up before exiting | | | | | | |
|  | Close all windows and log out. |  | | |  |  |
| The test case is completed. | | | | | | |

1. Requirements verification traceability matrix (RVTM)

If requirements are attached to the test cases, then maintain them together.

**Table 2 – Requirements Verification Traceability Matrix (RVTM)**

|  | | Description | Test Step (s) |
| --- | --- | --- | --- |
| **2807.** | **TO** | **ABI channels 1-5**  Process/display enhanced spatial resolution RaFTR data from at least simulated ABI channels 1-5. Rationale: These bands are 4 and 16 times the spatial resolution of the bands tested in Demo #1. Evaluate performance impact of the enhanced spatial resolution. | **19, 22, 26, 27, 28, 29, 30, 31, 32, 33, 39, 43, 44, 45, 46, 47, 48, 49, 55, 59, 60, 61, 62, 63, 64, 65, 71, 75, 76, 77, 78, 79, 80, 81, 89, 93, 94, 95, 96, 97, 98, 100, 108, 113, 114, 115,116, 118, 168, 171,174, 177, 181, 185,186, 189, 192, 199,203, 204,** |
| **2809.** | **TO** | **EDEX Features**  Demonstrate EDEX decode/store/retention/purge of the RaFTR stream. | **9, 10, 11, 12, 13, 14, 17, 209, 211, 213, 214,216, 221, 223, 225,228,** |
| **2810.** | **TO** | **AWIPS performance**  Ascertain and characterize the capability of the AWIPS software and development/test configuration to keep up with RaFTR's realtime transmission of the full GS-F&PS Appendix E data flow loading. Any chokepoints and/or bottlenecks shall be identified. This includes all of the AWIPS II functionality: ingest, decode, store, retain, display, and purge. | **9, 10, 11, 12, 13, 14, 17, 175, 176, 178,179,181, 182, 183, 184,185, 187, 188, 189,191, 193, 194, 196,197, 199, 200, 201,202, 203, 204, 209,211, 213, 214, 216,217, 221, 223, 225,228,** |
| **2811.** | **TO** | **Active data retention**  Retain at least 24 hours of the full Appendix-E datastream. | **226, 227,** |
| **2812.** | **TO** | **Mesoscale Loops**  Be able to display a loop of at least 48 consecutive mesoscale images at a rate of at least 10 frames/second. | **175, 176,177, 178, 179, 181,182, 183, 184, 185,192, 193, 194, 195,196, 197, 199, 200,201, 202, 203, 204,** |
| **2814.** | **TO** | **Display Loading**  Demonstrate the following AWIPS-II display concurrent capabilities: |  |
| 1. At least two instances CAVE D2D running for demo (in five pane view) | **166, 167,175, 176, 178, 179,182, 183, 184, 185,187, 188, 189, 191,193, 194, 196, 197,200, 201, 202, 203,204,** |
| 1. At least five images loaded in D2D simultaneously - one image per D2D pane, including interchangeably any ABI channel | **175, 176,178, 179, 182, 183,184, 185, 187, 188,189, 191, 193, 194,196, 197, 200, 201,202, 203, 204,** |
| 1. All panes looping with a minimum loop-size of 8 frames | **20, 21, 25, 32, 33, 37, 38, 42, 48, 49, 53, 54, 58, 64, 65, 69, 70, 74, 80, 81, 87, 88, 90, 91, 99, 100, 106,107, 111, 118, 175,176, 178, 179, 182,183, 184, 185, 187,188, 189, 191, 193,194, 196, 197, 200,201, 202, 203, 204,** |
| 1. Display images updating in realtime as new imagery becomes available | **See 2814c** |
| 1. Existing product labels and color tables | **23, 24, 32, 33, 40, 41, 56, 57, 65, 72, 73, 90, 91, 100, 109, 110,118, 175, 176, 178,179, 182, 183, 184,185, 187, 188, 189,191, 193, 194, 196,197, 200, 201, 202,203, 204,** |
| **2815.** | **TO** | **24 Hour Product Flow**  The RaFTR/TNCF/AWIPS-II will run flowing GOES East and West data for at least 24 consecutive hours in the following scenarios: |  |
| 1. GOES West Scan Mode (Mode 4) and GOES East Flex Mode (Mode 3) | **3, 4, 20,21, 22, 25, 26, 32, 33, 37, 38, 39, 42, 48, 49, 53, 54, 55, 58, 64, 65, 69, 70, 74, 80, 81, 87,88,99,100,106,107, 111,118, 229,** |
| 1. GOES West Scan Mode (Mode 4) and GOES East Scan Mode (Mode 4) | **See 2815a** |
| 1. GOES West Flex Mode (Mode 3) and GOES East Flex Mode (Mode 3) | **See 2815a** |
| 1. GOES West Flex Mode (Mode 3) and GOES East Scan Mode (Mode 4) | **See 2815a** |
| **2856.** | **TO** | **Demonstration AWIPS-II Configuration**  Demonstration should be performed on a operationally representative clustered environment. | **229** |
| **3014.** | **TO** | **96 Full disk Images in Loop**  Evaluate performance impact due to increasing imagery loop length for full disk GOES-R imagery to 96 images in loop. | **181, 183,184, 185, 199, 201,202, 204,** |
| **3065.** | **TO** | **Loop frame sub-sampling**  Demonstrate the ability to subsample (or decimate) in time available ABI imagery data. For example, create a 64 image loop of 24 hour loop of Scan Mode (5 minute refresh) imagery, where not all available images are used. | **150, 151,152, 155, 156, 157,** |
| **Applicable Requirements (for system modification)** | | | |
| **2816.** | **R** | **Channel Differencing**  Provide Capability for ABI channel differencing e.g. 11.2um - 3.9um | **22, 32, 33, 48, 49, 64, 65,80, 81, 100, 118,122, 125, 128, 131,134, 138, 141, 181,182, 183, 184, 185,199, 200, 201, 202,203, 204,** |
| **3062.** | **R** | **Color Table Size (prototype)**  Expand the AWIPS-II color assignment table to 16384 colors (14 bits). GOES-R ABI imagery will be provided with 12 and 14 bit dynamic range. AWIPS-II currently uses an 8-bit (256 color) assignment table to render imagery. There are some applications, such as visual smoke/ash detection, where operations have reported a need for full-scale color differentiation - i.e. a larger color table. | **161, 164,** |
| **Deferred Requirements** | | | |
| **2808.** | **R** | **Full Resolution Fixed Grid**  Process Fixed Grid, Full Disk, Full Resolution RaFTR data (GOES East and West) and display in standard CAVE Map projections. | **19, 22, 26, 27, 28, 29, 30, 31, 32, 33, 39, 43, 44, 45, 46, 47, 48, 49, 55, 59, 60, 61, 62, 63, 64, 65, 75, 76, 77, 78, 79, 80, 81, 93, 94, 95, 96,97, 98, 100, 108,113, 114, 115, 116,118,** |
| **2985.** | **R** | **D2D selection menus**  Be able to display any GOES-R ABI data on D2D via selection on satellite menu. | **22, 26, 32, 33, 29, 55, 65, 71, 81, 89, 100, 108,118, 168, 171, 174,177, 181, 186, 189,192, 195,** |
|  | |  |  |
| **Notes** | |  |  |
|  | | All F&PS Appendix E products are in NetCDF4 format as are all products coming across this interface. | |
|  | | The purpose of the December test and demonstration, besides showing development progress to date, is to help shape next steps for the next phase of development/testing (January-April 2014). | |