Test Case Guardian (Alert Visualization)

for

Contract DG133W-05-CQ-1067

Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0016

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Change History

Revision	Date	Affected Pages	Explanation of Change
Draft	21 Nov. 2008	ALL	Initial Draft
1	13 Jan. 2009	ALL	Result of NWS comments and PDT
2	16 Jan. 2009	ALL	Result of PDT
3	6 Feb. 2009	7, 13-17	Result of DT

Table of Contents

Page

List of Figures

Page

1.0 SCOPE

See TO10 Software Test Plan.

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_Guardian_Basic_1; Baseline_Guardian_Config_2.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates the capability of the AWIPS system to communicate with the end user via Guardian and the capability of the AWIPS system to allow the end user to configure communication messages with Guardian. Test steps 105-117 demonstrate the "Do Not Disturb" enhancement developed during TO10.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully
- CAVE and EDEX are running
- Data has been ingested
- Audio is available and set up on the workstation
- If the Alert Visualization Popup Message dialog appears before saving changes in the Configuration dialog window, the user must acknowledge all messages and clear all messages in the Log List window.
- Actions, Results, and Requirements highlighted in gray indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases. Grayed out test step(s) indicate functionality not yet delivered.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

Step #	Action	Result	Pass/Fail
1.	Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration…'.	The Alert Visualization Configuration GUI appears.	
2.	In the upper right of the configuration GUI are buttons for each of the three screens, select one (not the one you are on).	Alert Visualization moves to another screen.	
3.	Observe the current configuration listed in the upper middle of the configuration GUI.	The top middle of the GUI displays the name of the workstation default configuration.	
4.	At the top the GUI, MB1 click the 'Save As…' button. Enter '*wx-delivered-76'* in the text box and MB1 click 'Save'.	A dialog box appears stating that '*delivered'* as a reserved term.	
5.	MB1 click 'OK'.	The dialog box closes.	
6.	MB1 click the 'Save As…' button. Enter a unique name (e.g., 'Test1') and then MB1 click the 'Save' button.	The new configuration loads. The top middle of the GUI displays the name of the new configuration.	
7.	In the Layout section of the configuration GUI, select Q4 from the pull-down menu. Save and close the Configuration window.	The number of text lines changes to four: two on top and two on bottom, as displayed in the Message Text Layout: section. This displays on the Alert Visualization layout after closing the configuration dialog.	
8.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration'.	The Alert Visualization Configuration GUI appears.	
9.	MB1 click a category then MB1 click the layout configuration box in which the messages should be displayed. Repeat for all categories.	The categories display the cell number corresponding to the layout configuration boxes selected.	
10.	In the Common Settings section of the configuration GUI, set the blink duration to '30' and the audio duration to '10'.	The values are set.	
11.	Select all Text Message check boxes in the Common Settings section.	All check boxes are selected.	
12.	In the Sources & Priorities section, ensure: -all the 'Text' check boxes are selected for all sources -all 'Audio' check boxes are not selected. -all 'Popup' check boxes are selected.	The selected check boxes are checked.	
13.	MB1 click 'Save and Close'.	The Alert Visualization configuration GUI closes, saving the settings.	

Step #	Action	Result	Pass/Fail
14.	Then wait up to one minute for a message to popup. When a message pops up, check on the Text Message button to the right of the text message in the Alert Visualization message bar and verify: -No Audio sounded when the message appeared -The Text Message (under the Show Log button in the Alert Visualization Popup Message window and in the Log List) contains the category, priority, and source key (e.g., 12:54 PM (5) | WORKSTATION | WORKSTATION: Alerts Took: 24 ms to process 181 messages)	Verified.	
15.	Close the Alert Visualization pop-up and Log List. Then MB3 click on the Alert Visualization icon. MB1 click on 'Configuration…'.	The Alert Visualization Configuration GUI appears.	
16.	Unselect all the check boxes in the Common Settings Text Message section.	All check boxes are unselected.	
17.	Set the length of message log box to '10'.	The length of message log box is set.	
18.	MB1 click the 'Save & Close' button.	The Alert Visualization configuration GUI closes, saving the settings.	
19.	Then wait several minutes for messages to popup. After several messages pops up, verify 10 messages are listed in the log list.	Verified.	DR #1828
20.	MB1 click the 'Acknowledge All' button to close the Alert Visualization window. Then MB3 click on the Alert Visualization icon. MB1 click on 'Configuration…'.	The Alert Visualization Popup Message Dialog window closes. The Alert Visualization Configuration GUI appears.	
21.	Set the length of message log box to '15'.	The length of message log box is set to '15'.	
22.	MB1 click the 'Save & Close' button.	The Alert Visualization configuration GUI closes, saving the settings.	
23.	Then wait several minutes for messages to popup. After several messages pops up, verify 15 messages are listed in the log list.	Verified.	DR #1828
24.	Close the Alert Visualization text box. Then MB3 click on the Alert Visualization icon. MB1 click on 'Configuration…'.	The Alert Visualization Configuration GUI appears.	

Step #	Action	Result	Pass/Fail
25.	In the Sources section of the configuration GUI, observe that FFMP is highlighted in light blue.	FFMP is highlighted in light blue.	
26.	MB3 click on 'FFMP', and select Omit Monitor, and with MB3 select SNOW. NOTE: If a warning dialog appears, MB1 click 'YES' to close.	FFMP highlight turns yellow and the FF icon is no longer visible on Alert Visualization, but SCAN, FOG, SAFESEAS, & SNOW are visible.	
27.	MB3 click FFMP, and select 'Include Monitor'. Then MB3 click 'SNOW'. Check that FFMP, SCAN, FOG, SAFESEAS, & SNOW are present on an XT (Text) terminal. NOTE: If a warning dialog appears, MB1 click 'YES' to close.	FFMP highlight turns light blue and the FF icon becomes visible on Alert Visualization along with SCAN, FOG, SAFESEAS, & SNOW.	
28.	Create a new source by MB1 clicking on 'New' in the Sources section of the configuration GUI, entering DEL_TEST, and MB1 clicking 'Save'.	A new source called DEL_TEST is created.	
29.	MB3 click on the 'DEL_TEST'. Then select 'Delete'.	The source is deleted.	
30.	MB3 click on 'FFMP'.	Observe that delete is not an option.	
31.	Observe the icons on Alert Visualization.	Aside from the Alert Visualization logo, there should be 5 small icons shown, about 20x30 pixels.	
32.	Create a new source called GDN_TEST, if it does not already exist.	The GDN_TEST source is created.	

Step #	Action	Result	Pass/Fail
33.	With GDN_TEST selected, change the priority options in the Priorities section of the configuration GUI. Simply press in some of the options such as: text, blink text, popup, audio, & action. Hint: For popups, you may press in the button, click on the triangle, and add in the name of a bitmap located in /awips/fxa/data/. Hint: For an action, you must enter a path of a script. I suggest entering the following: /data/local/GDN_TEST_CFG/gdn_action.sh The script will simply output a test file on the workstation when called by Alert Visualization: /tmp/gdn_action.txt. The script is shown at the bottom of this test case.	Options change.	
34.	Enter the following in the Monitor Bitmap text box: error.xbm	Text is added	
35.	Enter the following in the Monitor Executable text box: /data/local/GDN_TEST_CFG/gdn_monitor.sh The script is shown at the bottom of this test case.	Text is added	
36.	Select on another source.	Message dialog will appear saying configuration was not saved.	
37.	Select No to not continue	Message dialog is closed and configurations are preserved.	
38.	Click Apply Changes, Save, Close.	Edits are saved.	
39.	Double click the new icon that has appeared. It should be a light gray X surrounded by black.	NA	
40.	In a terminal window type the following: cat /tmp/gdn_monitor.txt.	Text should appear and the time stamp in the text should match the current time.	
41.	Open a terminal window by clicking the left mouse button on the KDE desktop and selecting terminal.	A terminal window opens.	

Step #	Action	Result	Pass/Fail
42.	Ensure that one instance of Alert Visualization is running by issuing the following command: # ps –wef | grep –i guard If you would like to check the status on all workstations (suggested) issue the following command. It is best run on DX1. It would better the test if most or all of the workstations were logged into KDE. ➢ cd /data/local/GDN_TEST_CFG ➢ ./gdn_proc.sh The script is listed at the bottom of this test case.	One instance of Alert Visualization is running per workstation per user logged into KDE.	
43.	Ensure that the Alert Visualization application is viewed as a small, thin, and long application. By default it is usually located at the bottom of the middle monitor (:0.0). It should have launched automatically when KDE started.	Alert Visualization is viewed as a small, thin, and long application.	
44.	Ensure that Alert Visualization is always on top. Click and drag Alert Visualization and other windows and applications around to see if Alert Visualization remains on top. Use the left mouse button to click and drag other apps and right mouse button for Alert Visualization.	Alert Visualization remains on top.	
45.	Ensure that there are tips available by clicking the left mouse button on the i icon next to the Alert Visualization logo.	A list of tips is displayed.	
46.	Ensure that icons from SCAN, FOG, FFMP, SAFESEAS, & SNOW are displayed and that moving the mouse over them shows test.	SCAN, FOG, FFMP, SNOW & SAFESEAS are displayed and config screens can be launched.	
47.	Double click on the FFMP (FF) icon with mouse button one.	Config GUI opens.	
48.	Close the FFMP GUI.	Config GUI closes.	
49.	While you are executing this test case, ensure that Alert Visualization receives messages from multiple sources.	Alert Visualization receives messages from multiple sources.	
50.	Left click on the desk top & select the Start D2D from the list.	The D2D system launches.	

Step #	Action	Result	Pass/Fail
51.	Produce an error message for just your workstation. Ensure that another workstation is logged into. Create and error message by finding a product that is unavailable in D2D and selecting it. Usually when the data inventory is unavailable the menu time ("green time") is shown as dashes. Another option is to select the One Time Request for the radar menu and then closing it using the 'X' at the upper right of the GUI.	A pop-up message is displayed on your workstation only.	
52.	Load the test configuration: With mouse button one, press the Alert Visualization icon; select retrieve; select *willl_gdn_conf*; and select retrieve.	Action completed with no errors. If *willl_gdn_conf* is not available, then on a terminal window: a. cd /data/local/GDN_TEST_CFG cp willl_gdn_conf.gcf /data/fxa/workFiles/Alert Visualization/.	
53.	Before closing the configuration GUI, verify that in the top middle of the GUI the configuration is now set to: willl_gdn_conf.	New configuration is loaded.	
54.	Use test script to test Alert Visualization: Open a terminal window and enter the following commands: ➢ cd /data/local/GDN_TEST_CFG ➢ ./gdn_message.sh The script is listed at the bottom of this test case. *[See Fig. 1.]*	All steps of the test script are executed as expected.	
Blinking			
55.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration…'.	The Alert Visualization configuration GUI appears.	
56.	In the Alert Visualization configuration GUI, assign 'Workstation' to cell 1 in the Layout section.	Workstation is assigned to cell 1	
57.	Assign all other categories other cell numbers or set to 'None' by selecting 'Remove Selection'.	All other categories are set to cells 2, 3, 4, or None.	
58.	Under the Sources & Priorities section, select 'Workstation'. Then select/check all checkboxes (Text, Blink, Popup, Audio, and Log).	All checkboxes are selected.	
59.	Set the audio to each priority by MB1 clicking '…' and selecting a sound file.	The sound files are assigned.	

Step #	Action	Result	Pass/Fail
60.	Verify the sound files were assigned by hovering over the associated check box.	A line appears with the assigned sound file.	
61.	Select all other Sources and ensure the checkboxes for Priorities 3, 4, and 5 are unchecked.	All checkboxes for Priorities 3, 4, and 5 are unchecked.	
62.	Select/check all Text Message checkboxes in the Common Settings section.	The 'Show Priority', 'Show Source Key', and 'Show Category' checkboxes are selected.	
63.	Select/check the 'Expand Popup Information' option.	The 'Expand Popup Information' option is selected.	
64.	Set the following: – Length of Message Log to '30' – Blink Duration to '5' – Audio Duration to '10'	The Length of Message Log is set to '30'. The Blink Duration is set to '5'. The Audio Duration to '10'.	
65.	MB1 click 'Save and Close'. Then wait up to one minute for a message to popup.	The Alert Visualization configuration GUI closes, saving the settings.	
66.	When a message pops up, verify: – The Audio sounded when the message appeared. – Cell one blinked for 5 seconds when the message appeared in the Alert Visualization bar. – The Text Message in the Alert Visualization bar contains the category, priority, and source key (e.g., 12:54 PM (5) | WORKSTATION | WORKSTATION: Alerts Took: 24 ms to process 181 messages).	Verified.	DR #1964
67.	MB1 click 'Acknowledge All' in the popup window.	The popup window closes.	
68.	Close the Log List window.	The Log List window closes.	
Text Messages			
69.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration…'.	The Alert Visualization configuration GUI appears.	
70.	In the Alert Visualization configuration GUI, in the Text Message section under Common Settings, select only the 'Show Priority' checkbox.	The 'Show Priority' checkbox is selected.	
71.	MB1 click 'Save and Close'. Then wait up to one minute for a message to popup.	The Alert Visualization configuration GUI closes, saving the settings.	DR #1856

Step #	Action	Result	Pass/Fail
72.	When a message pops up, verify: – The Audio sounded when the message appeared – Cell one blinked for 5 seconds when the message appeared in the Alert Visualization bar – The Text Message in the Alert Visualization bar contains only the priority (e.g., 12:54 PM (5) Alerts Took: 24 ms to process 181 messages) and not the source key or category.	Verified.	DR #1964
73.	MB1 click 'Acknowledge All' in the popup window.	The popup window closes.	
74.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration…'.	The Alert Visualization configuration GUI appears.	
75.	In the Alert Visualization configuration GUI, in the Common Settings section, select only the 'Show Source Key' checkbox.	The 'Show Source Key' checkbox is selected.	
76.	MB1 click 'Save and Close'. Then wait up to one minute for a message to popup.	The Alert Visualization configuration GUI closes, saving the settings.	
77.	When a message pops up, verify: – The Audio sounded when the message appeared – Cell one blinked for 5 seconds when the message appeared in the Alert Visualization bar – The Text Message in the Alert Visualization bar contains only the source key (e.g., 12:54 PM WORKSTATION: Alerts Took: 24 ms to process 181 messages) and not the priority or category.	Verified.	DR #1964
78.	MB1 click 'Acknowledge All' in the popup window.	The popup window closes.	
79.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration…'.	The Alert Visualization configuration GUI appears.	
80.	In the Alert Visualization configuration GUI, in the Common Settings section, select only the 'Show Category' checkbox.	The 'Show Category' checkbox is selected.	
81.	MB1 click 'Save and Close'. Then wait up to one minute for a message to popup.	The Alert Visualization configuration GUI closes, saving the settings.	

Step #	Action	Result	Pass/Fail
82.	When a message pops up, verify: – The Audio sounded when the message appeared – Cell one blinked for 5 seconds when the message appeared in the Alert Visualization bar – The Text Message in the Alert Visualization bar contains only the category (e.g., 12:54 PM WORKSTATION | Alerts Took: 24 ms to process 181 messages) and not the priority or source key.	Verified.	DR #1964
83.	MB1 click 'Acknowledge All' in the popup window.	The popup window closes.	
84.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration…'.	The Alert Visualization configuration GUI appears.	
85.	In the Alert Visualization configuration GUI, in the Common Settings section, unselect all Text Message checkboxes.	No Text Message checkboxes are selected.	
86.	MB1 click 'Save and Close'. Then wait up to one minute for a message to popup.	The Alert Visualization configuration GUI closes, saving the settings.	
87.	When a message pops up, verify: – The Audio sounded when the message appeared – Cell one blinked for 5 seconds when the message appeared in the Alert Visualization bar – The Text Message in the Alert Visualization bar does not contain the priority, source key, or category (e.g., 12:54 PM Alerts Took: 24 ms to process 181 messages).	Verified.	DR #1964
88.	MB1 click 'Acknowledge All' in the popup window.	The popup window closes.	
Foreground/Background Color			
89.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration…'.	The Alert Visualization configuration GUI appears.	
90.	Under the Sources section box in the Sources & Priorities section, select 'WORKSTATION'.	'WORKSTATION' is selected.	
91.	In the Source & Priorities section, MB1 click '…' under Priority 5 of the Foreground/Background.	The Alert Visualization Color Dialog window appears.	

Step #	Action	Result	Pass/Fail
92.	Set the text color and background color. Then MB1 click the 'Apply Colors' button.	The Alert Visualization Color Dialog window closes. The 'MSG' block is colored to that set in the Alert Visualization Color Dialog window.	
93.	Repeat the previous step for Priorities 0 through 4.	The Alert Visualization Color Dialog window closes. The 'MSG' block is colored to that set in the Alert Visualization Color Dialog window.	
94.	MB1 click 'Save and Close'. Then wait up to one minute for a message to popup.	The Alert Visualization configuration GUI closes, saving the settings.	
95.	When a message pops up, verify: – The Audio sounded when the message appeared – Cell one blinked for 5 seconds when the message appeared in the Alert Visualization bar – Cell one is colored to that set in the Alert Visualization Color Dialog window, and inverts the colors upon blinking – The Text Message in the Alert Visualization bar does not contain the priority, source key, or category (e.g., 12:54 PM Alerts Took: 24 ms to process 181 messages).	Verified.	DR #1964
Alert Visualization Bar Manipulation			
96.	MB1 click and hold the crossed gold double end arrow symbol on the left side of the Alert Visualization bar, and drag it to a location away from its current position.	The Alert Visualization bar moves accordingly.	
97.	MB1 click and hold the double ended gold arrow symbol on the right side of the Alert Visualization bar to expand or contract the Alert Visualization bar.	The Alert Visualization bar expands or contracts horizontally accordingly.	
Alert Visualization Logs			
98.	With a message displayed in cell one, MB1 click the Log List text button to the right of the cell one text window.	The Log List window appears listing the log entries.	
99.	MB1 click on an entry line and select the 'Show Details' button.	A Details window opens that may or may not contain any information depending on the priority (e.g., Priority 5 returns a blank Details window, while a Priority 1 returns information).	
100.	Close the Details window by MB1 clicking the 'Hide Details' button.	The Details window closes.	

Step #	Action	Result	Pass/Fail
101.	MB1 click the 'Clear' button in the log list window.	All messages in the log list window are removed.	
102.	MB1 click the 'Close' button on the log list window.	The log list window closes.	
Alert Visualization Popup Message Dialog			
103.	On the Alert Visualization Popup Message Dialog window, MB1 click the 'Show Log' button (if necessary).	The popup expands to display the log list of messages.	
104.	Double MB1 click on an entry line.	A Details window opens that may or may not contain any information depending on the priority (e.g., Priority 5 returns a blank Details window, while a Priority 0 or 1 returns information).	
105.	Close the Details window by double clicking MB1 on a line in the message list.	The Details window closes.	
106.	Select/highlight a message by MB1 clicking on a message. Then MB1 click the 'Acknowledge Selected' button.	The message is removed from the log.	
107.	MB1 click the 'Acknowledge All' button.	The Alert Visualization Popup Message Dialog window closes and all messages are removed.	
Do Not Disturb Functionality			
108.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Do Not Disturb'.	The Do Not Disturb functionality is activated.	
109.	Wait up to one minute for a message to popup. – When a message pops up, verify: – The Alert Visualization (AV) symbol begins to blink, alternating with a red 'X' – Messages continue to appear and blink in the Alerts Visualization bar	Verified.	
110.	Hover the cursor over the AV symbol and verify a message appears with the number of unacknowledged messages.	Verified.	DR #1857
111.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Do Not Disturb'.	The Do Not Disturb functionality is deactivated. The Alert Visualization Popup Message Dialog window appears.	
112.	MB1 click the 'Show Log' button (if necessary).	All unacknowledged messages appear.	
113.	MB1 click 'Acknowledge All' button.	The Alert Visualization Popup Message Dialog window closes.	
114.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration…'.	The Alert Visualization configuration GUI appears.	

Step #	Action	Result	Pass/Fail
115.	In the Layout section, select the 'System_Tray' option. Then MB1 click the 'Save & Close' button.	The Alert Visualization configuration GUI closes, saving the settings. The Alert Visualization message bar disappears.	
116.	Wait up to one minute for a message to popup. When a message appears, verify: – Messages appear in the Alerts Visualization Popup Messages Dialog window – Messages appear in a popup balloon on or near the System Tray	Verified.	
117.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Configuration…'.	The Alert Visualization configuration GUI appears.	
118.	Unselect all popup checkboxes for all Sources and all Priorities.	All popup checkboxes are unselected.	
119.	Ensure the System_Tray layout option is selected. Then MB1 click the 'Save & Close' button. MB1 click the 'Acknowledge All' button on the Alert Visualization Popup Message window if necessary.	The Alert Visualization configuration GUI closes, saving the settings.	
120.	MB3 click on the Alert Visualization icon. Then MB1 click on 'Do Not Disturb'.	The Do Not Disturb functionality is activated.	
121.	Wait up to a minute. When a message appears, verify: – A popup balloon appears on or near the System Tray – No Alert Visualization Popup Message Dialog window appears – The Alert Visualization (AV) symbol remains static (no blinking 'X' appearing in alternating fashion)	Verified.	
End of Test			

gdn_action.sh

```
#!/bin/bash
#
# This script was created to test Guardian (DCS 3244-3247).

echo "Guardian has called this script at `date -u` - Action Test"
> /tmp/gdn_action.txt
```

gdn_monitor.sh

```
#!/bin/bash
#
# This script was created to test Guardian (DCS 3244-3247).

echo "Guardian has called this script at `date -u` - Monitor Test"
> /tmp/gdn_monitor.txt
```

Figure 1: Test Script for Alert Visualization (test step 53)

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
SYSR3118	The AWIPS system shall implement general alerting (Guardian) with workstation and GFE status.	ALL
SYSR3126	The AWIPS system shall implement the National Weather Service Guardian Alerting capability.	ALL