

Test Case Time Series Heavy

for

Contract DG133W-05-CQ-1067

Advanced Weather Interactive Processing System (AWIPS)

Operations & Maintenance

AWP.TE.SWCTR/TO10-0012

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Change History

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

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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_HydroTS (OB8.3); Baseline_HydroTS_OB8.1; Checkout_HydroTS_OB8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates that AWIPS provides the capability to execute the WHFS Hydro Time Series. The Hydro Time Series allows a WFO to monitor hydrologic points of interest by providing the interface to information necessary for daily hydrologic monitoring and forecasting. Hydro Time Series allows for the observation of X_Y plots, and tabular listing of stage data and precipitation data. This test case also verifies, through the Time Series tool, the ingest and storage of precipitation data in the IHFS database.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE and EDEX are running.
- Data has been ingested.
- The Test Group is set up.
- 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.	In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog.	The Hydro Perspective displays in CAVE.	
2.	MB1 click 'Time Series Graphs/Tables...' from the Live Data submenu.	The Time Series dialog opens.	
3.	In the Search box, search for a reservoir forecast point (station) with data. Hydroview can help the user do this by selecting 'Live Data' -> 'Stations Reporting Status/Latest Observations...'. reservoir forecast point	The station selected is highlighted in the box below.	
4.	Select the 'Table' button.	The Tabular Time Series window opens.	
5.	In the top of the Tabular Time Series window, highlight a 'Loc, PE, Dur, TS, E' combination line that has data.	If a line that has data was chosen, the data is displayed in the middle of the window.	
6.	Select the 'Close' button in the Tabular Time Series window.	The Tabular Time Series window closes.	
7.	Near the bottom of the Time Series window, highlight all the lines with a PE (Physical Element) starting with 'H' (e.g., HG and HT) or any with data. Hold the Ctrl key down and MB1 click each item to highlight multiple lines.	One or more lines are highlighted. (Only the first two in the list will be displayed.)	
8.	Select the 'Graph' button.	The Time Series Display window opens with the available physical element data represented as time series.	
9.	From the Graph menu, select 'Toggle Off the Show Latest Forecast Only' option.	Time series for forecasts with earlier basis times are displayed, if any.	
10.	From the Graph menu, select 'Data and Categories' from the Scale Stages cascading menu.	If flood categories are defined in HydroBase for the station, they will be displayed as yellow, red, and blue horizontal lines. The y-axis scale may adjust to fit the flood stages.	
11.	From the Graph menu, select 'Data Only' from the Scale Stages cascading menu.	Only the data appear, and the y-axis scale may adjust to fit the data.	
12.	From the options menu, select 'Points' from the Plot cascading menu.	The lines connecting the points in the time series plots disappear. The time series data are represented by points only.	
13.	Redisplay the lines by selecting 'Both' from the Plot cascading menu.	The lines and points are displayed.	

Step #	Action	Result	Pass/Fail
14.	From the Edit menu, select 'Select Trace'.	The mouse icon becomes a hand when hovering over a point, signifying that it is ready to select a trace.	
15.	Select a time series by MB1 clicking on the trace of a time series.	All the time series are represented by points and lines. The time series selected is highlighted in white, signifying that it can be edited.	
16.	Select 'Insert' from the Edit menu. Then MB1 click on about half a dozen places around the active trace.	Points are added where the mouse button is clicked. A line connects the points.	
17.	Select 'Delete' from the Edit menu. Then MB1 click on a point in the active time series.	The point selected is deleted.	
18.	Select 'Move' from the Edit menu.	The Move option is selected.	
19.	MB1 click and drag a point on the active time series.	The point can be moved vertically but not horizontally.	
20.	Select 'Cancel Changes' from the Edit menu.	All the changes in the graph that were made in Steps 16–19 are undone, and the time series returns to its original state	
21.	From the Edit menu, select 'Select Trace'.	The mouse icon becomes a hand when hovering over a line, signifying that it is ready to select a trace.	
22.	Select a time series by MB1 clicking on a trace of a time series.	All the time series are represented by points and lines. The time series selected is highlighted in white, signifying that it can be edited.	
23.	Select 'Insert' from the Edit menu. Then MB1 click on about half a dozen places around the active trace.	Points are added where the mouse button is clicked. A line connects the points.	
24.	Select 'Save' from the Edit menu.	A Save window opens.	
25.	Select 'Cancel' in the Save window.	The Save window closes. The changes in the trace are not saved to the database.	
26.	Select 'Insert' from the Edit menu. Then MB1 click on about half a dozen places around the active trace.	Points are added where the mouse button is clicked. A line connects the points.	
27.	Select 'Save' from the Edit menu.	A Save window opens.	
28.	Select 'OK' in the Save window.	The Save window closes. The changes in the trace are saved to the database.	
29.	Select 'File' and 'Quit' to exit the Time Series Display window.	The Time Series Display closes.	
30.	Redisplay the changes to the graph by selecting the 'Graph' button.	The trace is displayed with the changes.	

Step #	Action	Result	Pass/Fail
31.	Select 'Quit' from the File menu of the Time Series Display window.	The Time Series Display closes.	
32.	In the Time Series window, MB1 click the Mode dropdown arrow (Station Selection) and select 'Predefined Group'.	The Time Series window changes to Predefined Group mode.	
33.	Select 'TestGroup'. Then MB1 click the 'Table' button. Note: This step assumes the TestGroup was set up prior to running this step.	The Tabular Time Series window opens with data for the predefined groups of stations.	
34.	MB1 click the 'Close' button in the Tabular Time Series window.	The Tabular Time Series window closes.	
35.	Select 'Graph' in the Time Series window.	The Time Series Display window opens. The Time Series Display window shows data for stations defined in the <code>/awips/hydroapps/whfs/local/data/app/TimeSeries/group_definition.cfg</code> configuration file.	
36.	Press the 'PgDown' key.	The second page of data defined in the configuration file is shown (if there are two pages).	
37.	Select 'Quit' from the File menu in the Time Series Display window.	The Time Series Display window closes.	
38.	MB1 click the 'Close' button in the Time Series window.	The Time Series window closes.	
End of Test			

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
SYSR3179	CAVE shall provide the user the capability to launch Time Series from the CAVE Menu resulting in the display of the Time Series Control Dialog, an SWT Dialog, on the CAVE Workstation.	1 - 38
SYSR3180	The Time Series Control Dialog shall provide a Station Selection Mode to view data.	3
SYSR3181	The Time Series Control Dialog shall provide a Predefined Group Mode to view data.	32 - 34
SYSR3182	The Time Series Control Dialog shall allow the user to select either a Station Mode or a Predefined Group Mode.	3, 32 -33
SYSR3183	The Time Series Control Dialog shall default to the Station Mode.	3
SYSR3187	The Time Series Control Dialog shall allow the user to see a full list of available stations while in Station Mode.	3
SYSR3190	The Time Series Control Dialog shall allow the user to search for a station in the Station List by ID in Station Mode.	3
SYSR3191	The Time Series Control Dialog shall select the station in the Station List that is the closest matching entry to what the user entered in the Search box in Station Mode.	3
SYSR3192	The Time Series Control Dialog shall allow the user to select one of the displayed stations in Station Mode.	3
SYSR3193	The Time Series Control Dialog shall display the available traces (defined data types) for the selected station in Station Mode.	7 - 8
SYSR3197	The Time Series Control Dialog shall allow the user to select traces in Station Mode.	14 - 15
SYSR3200	The Time Series Control Dialog shall allow up to two different PE combinations to be selected in Station Mode.	7
SYSR3201	The Time Series Viewer shall plot two different PE combinations on two separate graphs on the same page in a vertical layout.	8
SYSR3202	The Time Series Control Dialog shall display the selected traces on a single page in Station Mode.	8
SYSR3203	The Time Series Control Dialog shall display a list of predefined groups when in Predefined Group Mode.	32 - 33
SYSR3204	The Time Series Control Dialog shall allow a user to select a single group from the list of predefined groups in Predefined Group Mode.	33
SYSR3207	The Time Series Control Dialog shall allow the user to exit the application by clicking the "Close" button.	38
SYSR3210	The Time Series Viewer shall allow the requested plots to occupy the entire Graphical Time Series window except for the menu bar at the top.	8
SYSR3211	The Time Series Viewer's Menu Bar shall provide the user five distinct pulldown menus: File, Page, Graph, Options, and Edit.	14 - 31
SYSR3216	The Time Series Viewer's File pulldown's Close selection shall close the Time Series window.	38
SYSR3218	The Time Series Viewer's Page pulldown's Page Down selection shall display the Next page.	36
SYSR3224	The Time Series Viewer's Graph pulldown's Show Latest Forecast Only selection shall display only the forecast time series with the latest basis time.	
SYSR3225	The Time Series Viewer's Graph pulldown's Scale Stages->Data Only selection shall scale the vertical axis to fit the HG time series data values.	10 -11
SYSR3226	The Time Series Viewer's Graph pulldown's Scale Stages->Data Only, Show Categories shall scale the vertical axis to fit the HG time series data values and display the lines for flood categories if the fall within the range of the	10 - 11

	data (default).	
SYSR3227	The Time Series Viewer's Graph pulldown's Scale Stages ->Data and Categories selection shall scale the vertical axis so that the lines for flood categories are always shown	10 -11
SYSR3229	The Time Series Viewer's Options pulldown's Plot->Points selection shall display the data as points only.	12
SYSR3231	The Time Series Viewer's Options pulldown's Plot->Both selections shall display the data as lines and points (default).	13
SYSR3235	The Time Series Viewer's Edit pulldown's Select Trace selection shall invoke the edit mode.	14 - 15
SYSR3236	The Time Series Viewer's Edit pulldown's Insert selection shall allow a user to insert a point in a trace.	16
SYSR3237	The Time Series Viewer's Edit pulldown's Delete selection shall allow a user to delete one or more data points from the trace.	17
SYSR3238	The Time Series Viewer's Edit pulldown's Move selection shall allow a user to modify an existing data point by moving it to a new location.	18 - 19
SYSR3239	The Time Series Viewer's Edit pulldown's Save to Database selection shall save the modifications to the IHFS database.	25 - 30
SYSR3240	The Time Series Viewer's Edit pulldown's Cancel Changes selection shall cancel the modifications, restoring the original time series.	20
SYSR3251	The Time Series Viewer shall display the flood stage for a river PE.	10
SYSR3252	The Time Series Viewer shall display the corresponding stage or discharge value of H* or Q* PE types by annotating the right y-axis.	10
SYSR3253	The Time Series Control Dialog shall allow the user to view the selected data in Tabular format by clicking the "Table" button.	4 - 5
SYSR3254	The Table button shall open a Tabular Time Series window if one is not already open.	4 - 5
SYSR3263	The Tabular Time Series shall display the time series which were set up for the group that was selected in the Time Series Control Dialog at the time the Table button was pushed.	33 - 34
SYSR3264	The Tabular Time Series shall display the time series available for the station that was selected in the Time Series Control Dialog at the time the Table button was pushed.	5
SYSR3306	The Tabular Time Series Close button shall close the Tabular Time Series Window.	6