Test Case Stability 3.0

for

Contract DG133W-05-CQ-1067

Advanced Weather Interactive Processing System (AWIPS)

AWP.TE.SWCTR/TO10-0024

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Change History

Revision	Date	Affected Pages	Explanation of Change
Draft	21 Nov.2008	ALL	Initial Draft
Draft	16 Jan 2009	All	Updated for NWS test case review responses and Camel for Mule substitution

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1.0 SCOPE

See Software Test Plan.

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2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The AWIPS D-2D User's Manual Build 8.1.
- The Silver Spring NWS AWIPS 1 test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

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3.0 TEST CASE DESCRIPTION

This test case demonstrates the stability of the software by running continuously with an OAX SBN live data flow while monitoring system resources for usage and log files for critical errors. This test case also involves running CAVE periodically checking for retrieval of current data. This test case is verified at the local Omaha test site on the test hardware prior to or during PDT. The test results are recorded in the Test Report. Stability issues exposed during the test, if any, are analyzed and required corrections determined. Corrections that cannot be applied prior to Delivery Testing are reported. As is the case with other tests, critical defects that prevent testing and evaluation of TO10 delivery functionality will be corrected prior to acceptance of the delivery. Non-critical defects (those for which a reasonable work around can be provided, or which does not prevent subsequent testing) will be corrected during TO11 or a subsequent Task Order as appropriate.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully on the test cluster and the test workstations
- EDEX is running on both nodes of the cluster
- Live data from a SBN data feed with filtering for OAX
- Monitoring cron for system resources running
- Camel and activemq log files configured to persist through the entire test interval

3.2 Recommended Hardware

See Software Test Plan.

3.3 Test Inputs

Test inputs are defined by the SBN acquisition patterns which will be set to OAX. A copy of the file defining the acquisitions patterns will be included in the test report.

3.4 Test Outputs

- Copy of SBN data acquisition patterns
- System resources will be logged and stored
  - Linux “uptime” logged on each node
  - Daily “ps –ef|grep java” logged on each node with timestamps
  - Daily “ls –lR” of hdf5 tree logged with timestamp
  - Daily file count of the “processing” directory logged with timestamps
  - Daily JMX snapshots of Camel and activemq heap memory
  - Default SysStat system resource monitoring logged
- Camel Log files will be stored
- ActiveMQ Log files will be stored
- Issue analysis report, if required.

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4.0 TEST SCENARIO

Step	Action	Result	Pass/Fail
1.	Start and let EDEX run without interruption for 14 days.	EDEX continues running for 14 days	
2.	Run CAVE daily on a workstation to display satellite, radar, and model data.	CAVE displays current satellite, radar, and model data	
3.	After the 14 day test period examine the system resources and log files to verify EDEX and CAVE are still running.	Camel logs indicate data is being ingested. System resources are still available	
4.	Collect logs and monitoring data.	Logs and monitoring data become part of the test report.	
End of test.			

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5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
CAVE_TO8_040	AWIPS II shall ingest data continuously for 14 days without requiring a restart.	ALL

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