

AE IV&V Test Case TO8_8002

Revision History

Rev. No.	Date	By	Description of Changes
1.0	4/16/08	Tom Kretz	Initial Release.

1. TEST CASE IDENTIFIER

TO8_8002

2. NARRATIVE

Test the latency of sending text messages with a large number of binary messages going across the services/ESB layer of the system.

3. REFERENCES

AWIPS II TO8 Software Installation instructions and Quick Start Admin Guide (NWS)

4. FEATURES TO BE TESTED

Performance of the ESB layer

5. SETUP INSTRUCTIONS

Assumptions about the system configuration and status: The baseline TO8 software is installed as described in the TO8 Software Installation procedures for a standalone system, the canned KOAX test data collected by NWS/OST/SEC is used for the tests, and the system is operational as shown in the TO8 Quick Start Admin Guide. The SEC Web Test Driver Java Web application and input test scripts are installed in the Tomcat webapps directory.

The SEC Web Test Driver application has to be installed. This is a NWS developed Java Web application that reads in Javascript requests from a text file. The XML files are parsed to retrieve the Javascript tags to create product requests. The Javascript requests are created by running the requests in the uEngineWeb web application and copying the generated script to the input test files.

Step	Setup Procedure	Result
1	Install the SEC Web Test Driver application running in Tomcat	
2	Configure test script files for requesting 10, 50, 100 and 1000 text products	
3	Configure test script files for requesting 10, 50, 100, 1000 with 30% goes, 30% grib and 40% radar product requests	
4	Purge metadata and hdf5 repositories	
5	Ingest canned test data	

6. ACCEPTANCE CRITERIA

The tests are intended to document the performance of the TO8 release running in Linux for moderate data volumes. These tests are not meant to be an indication of the AWIPS II performance, but to identify and track the performance of standard tests across the ESB.

7. TESTING PROCEDURE

Using the SEC Web Test Driver application running in Tomcat, send multiple requests for image and ascii data to the ProductSrv on the EDEX server. The ProductSrv replies to the request by processing the request and putting the response messages on the Reply to Queue. Then the web application gets the messages from the queue, calculates a few statistics and discards the data.

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The ActiveMQ Broker, Mule ESB and Tomcat servers were shutdown and restarted before each test, so any memory caches and queues were cleared between tests. This is about as close to the same initial conditions that we can get for each test.

The following statistics are captured in the web application:

Put Time: time in seconds to put all the request messages on the ProductSrv Queue

Get Time: time in seconds to get all the response messages from the Reply to Queue

Get Process Time: time in milliseconds since the request message was sent to the end of processing the return message for the request.

For the Latency test the following number of request will be sent requesting the same product for each type:

10 image request messages and 10 ascii request for each case

50 image request messages and 50 ascii request for each case

100 image request messages and 100 ascii request for each case

1000 image request messages and 1000 ascii request for each case

Step	Procedure	Expected Result	Actual Result
1	Restart edex_activemq, edex_mule, and edex_tomcat services	Services stop and restart	
2	Open testEngineWeb web app in Browser	Start page of app opens	
3	Enter the filename for the 10 ascii requests test scripts		
4	Enter second filename for 10 image requests test scripts		
5	Select "Submit Request" button	After requests are processed the test results page displays	
6	Note the times to process the ascii request		
38	Repeat step # 1	Services stop and restart	
39	Enter first filename for 50 ascii requests test scripts		
40	Enter second filename for 50 image requests test scripts		
41	Select "Submit Request" button	After requests are processed the test results page displays	
42	Note the times to process the latency request		
43	Repeat step # 1	Services stop and restart	
44	Enter first filename for 100 ascii requests test scripts		
45	Enter second filename for 100 image requests test scripts		
46	Select "Submit Request" button	After requests are processed the test results page displays	

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Step	Procedure	Expected Result	Actual Result
47	Note the times to process the ascii request		
48	Repeat step # 1	Services stop and restart	
49	Enter first filename for 1000 ascii requests test scripts		
50	Enter second filename for 1000 image requests test scripts		
51	Select "Submit Request" button	After requests are processed the test results page displays	
52	Note the times to process the latency request		
	End of test		