

HazCollect Mini-Operational Test & Evaluation (OT&E)
Wrap-Up Meeting Minutes
March 31, 2009

Attendees:

Eastern Region: John Koch
WFO Pittsburgh, PA: Joe Palko
Southern Region: Janice Bunting
WFO Paducah, KY: Deanna Lindstrom
Western Region: Jeffrey Lorens
Alaska Region: Gary Hufford
Pacific Region: Bill Ward

CIO14: Odon Dario
OPS23: Warrick Moran
OPS24: Jae Lee, Bert Viloría, Aaron Poyer
OS51: Herb White, Art Kraus
OST3: Deirdre Jones
OST11: Joel Williams, Steve Pritchett
OST31: Timothy Hopkins

Daviess County, KY EM: Walter Atherton
DHS/DMIS: Rick Hauschildt
UACS: Valencia Hicks

On Tuesday March 31, the National Weather Service Test & Evaluation Branch (OPS24) hosted the HazCollect Mini-Operational Test & Evaluation (OT&E) Wrap-Up Meeting. The purpose of the meeting was to present the OT&E test results. During the meeting, the following items were discussed:

1. **Test Summary** - Bert Viloría explained that all prerequisites for the OT&E were met and the test started on March 16th and ended March 27, 2009. End to end dissemination were performed by Walter Atherton at Paducah, KY and the test site was WFO Paducah, KY. The DMIS OPEN API demonstration was performed by Art Botterell in Contra Costa County, CA and by Thomas Simon in Hawaii. For both demonstrations, Hormann America was capturing input messages and sending them as CAP messages to the DMIS server. The DMIS OPEN API test sites were WFO Sacramento CA, WFO San Francisco CA, and WFO Honolulu HI.
2. **Test objectives and results** - Bert Viloría summarized the test objectives and the test results from the OT&E including:
 - a. Verify Test Trouble Reports (TTR)
 - i. **TTR #55:** HazCollect mode not saved in all servers - **FAIL**. Reasonable and acceptable workaround has been identified by OST31.
 - ii. **TTR #56:** HazCollect message queue data are not available for display in all servers - **PASS**
 - iii. **TTR #61:** DMIS/HazCollect posting incorrect time standard (Standard Time vs. Daylight Savings Time) on NWEM message - **PASS**. Rick

Hauschildt added that DHS is currently working on providing the Java file fix via the update function by this summer where client users can easily update their DMIS client software. Without the fix, the problem would not re-occur until the change from DST to Standard Time on October 25, 2009.

- iv. **TTR #65:** FOTE failover for outgoing test for backup rack - This TTR was initially tested on March 20th and failed. On April 2, the retest was successful - **PASS**.

- b. Verify HazCollect for end-to-end dissemination – **PASS**.
- c. Verify failover ingest/outgoing tests - During initial failover testing, both ingest (see new **TTR #67**) and the outgoing (see previous **TTR #65**) procedures failed. On April 1 and 2, the retest was successful - **PASS***.
- d. Verify the HazCollect national message functionality - **PASS**. Problems reported from sites were AWIPS/CRS configuration issues. There was a reported NWRWAVES issue at WFO Paducah but a retest performed on March 26th which successfully verified OPS23 fix instructions.
- e. Demonstrate the DMIS OPEN API end-to-end functionality - While both test ADR messages were successfully received by HazCollect and broadcasted at the site transmitters, Herb White found format and content errors on the WMO message. He recommended that there needs to be better documentation that would include precise instructions to mitigate the format/content issue. An action item (see **Action Item #1**) has been generated for Steve Pritchett to include clarification in the Memorandum of Agreement (MOA) for this additional/updated documentation.
- f. Verify NWRWAVES use as formatter for HazCollect - **PASS**. Warrick Moran noted that the fix instructions used during the test are not part of AWIPS 9.2 installation/distribution. Joe Palko also added that NWRWAVES product setup could take up a longer time than currently expected. An action item (see **Action Item #2**) has been identified for NWSHQ personnel to discuss how to properly disseminate these NWRWAVES setup instructions for HazCollect.
- g. Verify new COGs/users registration – **PASS**
- h. Database testing – During initial testing, this was not verified due to failover failure (see objective c). On April 1 and 2, the retest was successful - **PASS ***.

*these objectives were retested April 1-2, 2009.

- 3. **Test Trouble Reports** – There were 2 new TTRs generated during the OT&E:
 - a. **TTR #67:** Failover testing – Ingest processing for both Rack 1 routers disconnected failed. (Priority 1, Impact 1). The April 1 and 2 retest was successful – **CLOSED**.
 - b. **TTR #68:** OT&E National Message Test issue reported by WFO Paducah KY (Priority 5, Impact 6) - **CLOSED** per successful retest March 26, 2009.

- 4. **Conclusions**
 - a. **Tim Hopkins explained that they just recently installed fixes on the HazCollect servers for the failover failures and would like to extend the OT&E to perform the retest. The group, including the regional point of contacts, agreed to extend the OT&E to verify these fixes. The OT&E will be extended up to Friday April 3, 2009. Additionally, the OT&E test review**

group voting will be postponed until after the results of the retest at a scheduled date and time.

b. RETEST RESULTS

On April 1 through April 2, the test team retested the failover ingest and outgoing test procedures as recommended by the test review group. The failover tests started with both primary (Rack 1) and backup rack (Rack 2) available and operational.

The primary database was configured for Rack 1 at Silver Spring. Due to the database redesign, the regression retests were only performed for the system failovers.

Ingest failover tests

In Test #4, all routers from Rack 1 were disconnected, and the system properly switched the connections, including the primary database, to the backup rack (Rack 2) at Mt Weather. The switchover took about 5-15 minutes before full operational status was acquired at Rack 2.

Test message was successfully sent and confirmed to have been sent through Rack 2. This verifies and successfully confirms the fix for TTR #67. TTR #67 is now CLOSED. Additionally, modified database values were verified to be replicated at the backup rack at Mt Weather. This confirms the Test Objective 2h.

In Test #7, where both the Rack 1 routers are connected, but the Rack 2 routers are disconnected, both CIO and OPS24 are recommending an enhancement to the current database design.

Outgoing failover tests

In Test #11, all Rack 1 output to TG connections were shutdown and the test message was successfully sent and confirmed at TG.

In Test #12, in addition to both Rack 1 output being shutdown, one of the Rack 2 output line to TG was shutdown. Test message was successfully sent and confirmed at TG.

In Test #13, in addition to both Rack 1 output being shutdown, the previously Rack 2 shutdown output line connection was switched ON. Additionally, the other Rack 2 output line was shutdown. Test message was successfully sent and confirmed at TG.

These outgoing test results verify and confirm the fix for TTR #65. TTR #65 is now CLOSED. For both ingest and outgoing tests, the successful retests confirm Test Objective 2c.

- c. After the retest, the outstanding issues from the OT&E and known impacts are summarized:

Failed Tests/Issues	Work-Around?	System Impact	User Impact
TTR #55	Yes. System Admin needs to set server mode for all servers at one time.	System Admin will need at least 2-5 minutes to change all modes.	The user messages are not assured of proper dissemination until the server modes have been applied for all servers. This situation could last between 2-5 minutes.

Action Items

1. **Action Item 1:** Steve Pritchett will include in the MOA clarification for additional and/or updated information/documentation regarding proper CAP-converted WMO contents and format (POC: Steve Pritchett).
2. **Action Item 2:** NWS will discuss how to disseminate setup instructions for NWRWAVES use as the HazCollect formatter (POC: Herb White, Mike Moss, Warrick Moran, Joe Palko, OS&T, OPS24).