Defense Enterprise Accounting and Management System (DEAMS)
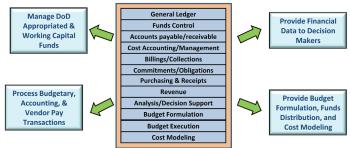
Executive Summary

- The Air Force Operational Test and Evaluation Center (AFOTEC) conducted an operational assessment (OA) of the Defense Enterprise Accounting and Management System (DEAMS) from August 2013 through February 2014. The test locations included Headquarters U.S. Transportation Command (HQ USTRANSCOM) and Headquarters Air Mobility Command (HQ AMC), both located at Scott AFB, Illinois; the Defense Finance and Accounting Service (DFAS) in Limestone, Maine; and base operations at five AMC bases.
- In conjunction with the OA, the 177th Information Aggressor Squadron conducted a Cyber Economic Vulnerability Assessment (CEVA) under the oversight of DOT&E. The assessment determined it would be possible for knowledgeable adversaries to penetrate DEAMS and conduct fraudulent activities, including exploiting DEAMS for economic gain.
- DEAMS demonstrated progress toward resolving previous effectiveness shortfalls and the OA found few new systemic defects, but some balances are still inaccurate. The quality of reports, responses to ad hoc queries, and usefulness of error messages remained poor.
- DEAMS demonstrated progress toward resolving previous suitability problems. The system met its reliability and availability requirements, but it experienced problems with cybersecurity, training, timely resolution of software defects, and interoperability with critical systems.
- The DEAMS IOT&E has been delayed due to performance issues.

System

- DEAMS is a Major Automated Information System that uses commercial off-the-shelf Enterprise Resource Planning software to provide accounting and management services for the Air Force and U.S. Transportation Command (USTRANSCOM).

- DEAMS operates on the Global Combat Support System – Air Force Integration Framework. It interfaces with approximately 40 other systems that provide travel, payroll, disbursing, transportation, logistics, acquisition, and accounting support. DEAMS will deploy to USTRANSCOM, the Air National Guard, and all Air Force major commands, including those overseas. There are expected to be nearly 30,000 users worldwide by 2017.

Mission

- USTRANSCOM and Air Force financial managers use DEAMS to compile and share accurate, up-to-the-minute financial management data and information across USTRANSCOM and the Air Force.
- USTRANSCOM, Air Force, and DOD leadership use DEAMS to access vital, standardized, real-time financial data and information to make strategic business decisions and to satisfy congressional and DOD requirements for auditing funds, standardizing financial ledgers, timely reporting, and reduction of costly rework.

Major Contractor

Accenture Federal Services – Dayton, Ohio

Activity

- In August 2014, AFOTEC observed developmental testing of DEAMS Release 3.
- AFOTEC conducted a DEAMS OA from August 2013 through February 2014. The test locations included HQ USTRANSCOM and HQ AMC, both located at Scott AFB, Illinois; the DFAS facility in Limestone, Maine; and base operations at five AMC bases.
- In conjunction with the OA, the 177th Information Aggressor Squadron conducted a CEVA under the oversight of DOT&E.

- DOT&E issued a report on the DEAMS OA on June 10, 2014.
- AFOTEC began the DEAMS IOT&E in October 2014 in accordance with a DOT&E-approved test plan. Only the end-of-year activities were observed. The Program Executive Office delayed certification of the program for the bulk of IOT&E due to performance issues. IOT&E is scheduled to resume in January 2015.

Assessment

- During the OA, DEAMS demonstrated progress toward resolving previous effectiveness shortfalls and the OA found few new systemic defects. Some balances are still inaccurate and the quality of reports, responses to ad hoc queries, and usefulness of error messages remain poor.
  - DEAMS now prevents the posting of transactions that exceed control targets. While maintenance of fiscal accountability in balancing funds for the General Ledger and subsidiary accounts (a Key Performance Parameter) is still unsatisfactory, it has improved.
  - Nine of 11 tested measures that quantify the quality of DEAMS financial information now meet thresholds, and the other two (standards compliance and General Ledger operations) are improving. All three timeliness thresholds (recording transactions, vendor payments, and period-end closings) were met and user access roles are generally being assigned properly.
  - DEAMS Release 3 includes a new software application for producing reports; it will be evaluated during the IOT&E.
- The DEAMS OA also demonstrated progress toward resolving previous suitability issues. The system met its reliability and availability requirements, but continues to suffer from problems with training, timely resolution of software defects, interoperability with critical systems, and cybersecurity issues.
  - Software reliability growth, as measured by reduction of defect reports, has been static. Although configuration management has improved, there are still a large number of unresolved defects. Several required capabilities and enhancements are scheduled for near-term release and are being tested during IOT&E.
  - One critical interface with the Departmental Cash Management System (which manages and reconciles cash disbursements, reimbursement, collections, and receipts) did not meet interoperability requirements. Not all interfaces were tested during the OA. All deployed critical interfaces must be operationally demonstrated in conjunction with IOT&E.
  - New user training was inadequate because it focused on how to navigate within DEAMS and did not provide users with a real understanding of the system and its application to their day-to-day work processes.
- The CEVA demonstrated that a cyber adversary with knowledge of DEAMS and DOD business practices could gain access to DEAMS and conduct denial-of-service and fraudulent activities, including exploiting DEAMS for economic gain. Further information can be found in the classified appendix to DOT&E's June 2014 OA report.
- DOT&E will prepare a report on the DEAMS IOT&E upon completion of testing.

Recommendations

- Status of Previous Recommendations. The FY12 recommendation for the Program Office and Functional Management Office to document workarounds at the base level remains unresolved. The Air Force has made progress on all FY13 recommendations. The recommendation to correct Information Assurance deficiencies and perform Information Assurance and financial fraud penetration testing was partially satisfied by conducting the CEVA; both cooperative and adversarial penetration testing will be conducted during IOT&E to further assess cybersecurity vulnerabilities. The Air Force also made progress toward updating training materials during the OA; training will be assessed again during IOT&E. The recommendation to provide more on-site technical support to new users at the base level has been addressed.
- FY14 Recommendations. The Program Office should:
  1. Accelerate the correction of balance accuracy defects in order to meet the Accurate Balance of Funds Key Performance Parameter and achieve full auditability.
  2. Address the cybersecurity recommendations provided in the classified CEVA appendix to DOT&E's June 2014 OA report.