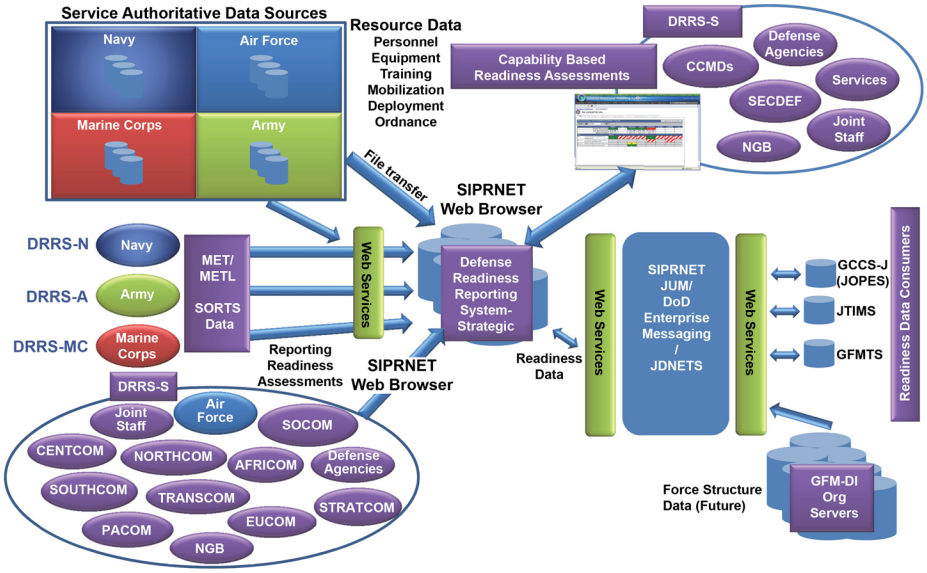
Defense Readiness Reporting System – Strategic (DRRS-S)



AFRICOM - Africa Command
CCMDs - Combatant Commanders
CENTCOM - Central Command
DRRS-A - Defense Readiness Reporting System - Army
DRRS-MC - Defense Readiness Reporting System - Marine Corps
DRRS-N - Defense Readiness Reporting System - Navy
EUCOM - European Command
GCCS-J - Global Command and Control System – Joint
GFM-DI - Global Force Management Data Initiative
GFMTS - Global Force Management Toolset
JDNETS - JOPES Data Network Services
JSUB - JOPES Subscriptions
JOPES - Joint Operational Planning and Execution System
JTIMS - Joint Training Information Management System
JUM - Joint User Messaging
MET - Mission Essential Task
METL - Mission Essential Task List
NGB - National Guard Bureau
NORTHCOM - Northern Command
PACOM - Pacific Command
SECDEF - Secretary of Defense
SIPRNET - Secret Internet Protocol Router Network
SOCOM - Special Operations Command
SORTS - Status of Resources and Training System
SOUTHCOM - Southern Command
STRATCOM - Strategic Command
TRANSCOM - Transportation Command

Executive Summary

- The Joint Interoperability Test Command (JITC) conducted the Defense Readiness Reporting System – Strategic (DRRS-S) IOT&E from May 2015 through June 2015. Emerging results identified significant system and end-to-end process deficiencies. The DRRS-S Program Manager (PM) requested an extension of the IOT&E through October 2015 to correct system deficiencies and allow JITC to independently validate the fixes. DOT&E agreed to the extension. JITC continued IOT&E in September and October 2015. The IOT&E was adequate to evaluate operational effectiveness, suitability, and survivability.
- DRRS-S is operationally effective. Tactical units entered objective, accurate, and timely resources and training measurement data into DRRS-S and the Service DRRS variants to inform resource assessments of core missions and other mission assessments of units at all levels. The Service DRRS variants for the Army, Navy, and Marine Corps effectively published these data to DRRS-S, such that users could view all readiness assessments within DOD from the DRRS-S application.
- DRRS-S is operationally suitable. Users assessed the system usability as being acceptable. Users accessed the DRRS-S mission readiness view in a mean time of 20 seconds, well below the 5 minutes required. The system was operationally available 99.9 percent of the time and help desk support was responsive to user requests for assistance. Users reported no critical software failures between June and October 2015.
- DRRS-S is operationally survivable against a cyber threat with moderate capabilities. The DRRS PM corrected most cybersecurity vulnerabilities discovered in the Cooperative Vulnerability and Penetration Assessment phase of testing, and the Red Team could not exploit them during the Adversarial Assessment.
- Based upon the IOT&E Emerging Results Brief, dated February 17, 2016, the Principal Deputy Assistant Secretary of Defense (Readiness) and the Director of the Joint Staff approved the transition from the Global Status of Resources and Training System to DRRS-S on March 1, 2016.

System
- DRRS-S is a Secret Internet Protocol Router Network-accessible web application designed to replace the Global Status of Resources and Training System, a force readiness component of Global Command and Control System – Joint.
- DRRS-S production and backup systems are hosted at separate Defense Enterprise Computing Centers on commercial off-the-shelf hardware consisting of application and database server enclaves using Microsoft Windows operating systems.
- DRRS-S receives and processes readiness reports and data from Service-specific increments of the larger DRRS enterprise, including DRRS-Army, DRRS-Marine Corps, and DRRS-Navy. Combatant Commanders and the subordinates they direct, DOD agencies, and Air Force units report directly within DRRS-S.

Mission
- The Combatant Commanders, military Services, Joint Chiefs of Staff, Combat Support Agencies, and other key DOD users (such as the SECDEF and National Guard) use the DRRS collaborative environment to evaluate the readiness and capability of U.S. Armed Forces to carry out assigned and potential tasks.
- Reporting organizations input both mission readiness and unit readiness data – such as Status of Resources and Training System data – into DRRS-S and use it to make mission readiness assessments against standardized missions and tasks.

Major Contractor
InnovaSystems International, LLC – San Diego, California

Activity
- From May 2015 through June 2015, JITC conducted an IOT&E in accordance with the DOT&E-approved test plan. The IOT&E revealed a number of significant deficiencies with the system and end-to-end data management processes. Therefore, the DRRS-S PM requested an extension of the IOT&E through October 2015 to allow for the correction of system deficiencies and provide sufficient time for JITC to independently verify the fixes. DOT&E agreed to the extension.
- JITC continued the IOT&E in September and October 2015 using the DOT&E-approved test plan. This test window included two monthly readiness reporting cycles to verify the accuracy, completeness, and timeliness of Service readiness reports.
- JITC and the Army Research Laboratory, Survivability and Lethality Analysis Directorate, conducted a cybersecurity Cooperative Vulnerability and Penetration Assessment from February 2015 through May 2015. The Defense Information Systems Agency Risk Management Executive Red Team conducted a cybersecurity Adversarial Assessment in June 2015.
- Based upon the IOT&E Emerging Results Brief, dated February 17, 2016, the Principal Deputy Assistant Secretary of Defense (Readiness) and the Director of the Joint Staff approved the transition from the Global Status of Resources and Training System to DRRS-S on March 1, 2016.

Assessment
- DRRS-S is operationally effective. Tactical units entered objective, accurate, and timely resources and training measurement data into DRRS-S and the Service DRRS variants to inform resource assessments of core missions and other mission assessments of units at all levels. The Service DRRS variants for the Army, Navy, and Marine Corps effectively published these data to DRRS-S, such that users could view all readiness assessments within DOD from the DRRS-S application. DRRS-S could then publish readiness assessment information to other critical downstream consumers, such as the Joint Operations Planning and Execution System and the Global Combat Support System (GCSS) – Joint. The Services' and the Joint Staff's readiness staffs faced some challenges to attain a common understanding of the current reporting status of all DOD units, but close coordination allowed staff members to explain apparent differences in readiness data. The Services' and Joint Staff's representatives agreed that the adverse mission impact of the apparent differences was low.
- The information in DRRS-S is only as objective, accurate, and timely as the data received and processed from the Services. DOT&E's evaluation of DRRS-S resource category levels considered whether they were consistent with 1) Service-reported resource levels, to assess DRRS-S accuracy and timeliness, and 2) the prescribed procedures in the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3401.02B, to assess objectivity of DRRS-S data. As discussed above, DRRS-S data were accurate and timely.
  - Air Force assessments were consistent with CJCSI guidance for all four resource and training categories.
  - The Army's method for calculating the Equipment Condition/Readiness level (referenced as the R-level) relies on dated information from the Army Material Status System report, which provides availability rates from the previous month. The Army plans to follow the CJCSI rule more precisely after the maintenance functions in GCSS-Army are fielded in FY17. DOT&E expects that Army assessments will be consistent with CJCSI guidance once the Army fields GCSS-Army maintenance functions.
  - Marine Corps assessments were consistent with the CJCSI guidance with the observation that units must manually transcribe data from GCSS-Marine Corps into DRRS-Marine Corps, which increases workload and the chance for errors.

  - Navy assessments were inconsistent with the CJCSI guidance, with only 30 percent (10 of 33) of assessed levels in DRRS-S consistent with the objective Figures of Merit in DRRS-Navy. The differences primarily are due to commander subjective upgrades of the readiness levels, which could reflect that the commander has more current knowledge than DRRS-S. However, some of the upgrades indicate some variation from the objective criteria in the CJCSI for the Navy core resource levels. The Navy should improve its guidance to commanders so that the DRRS-S resource levels are based on objective criteria, consistent with the Figures of Merit in DRRS-Navy.
- DRRS-S is operationally suitable. Users assessed the system usability as being acceptable, as evidenced by the average System Usability Scale score of 70.9, a high score for a DOD system. Users accessed the DRRS-S readiness view in a mean time of 20 seconds, well below the 5 minutes required. The system was operationally available 99.9 percent of the time and help desk support was responsive to user requests for assistance. Users reported no critical software failures between June and October 2015. A third of users responding in the survey felt that they needed more training, especially on the Air Force Input Tool, and this is substantiated by help desk requests for Business Intelligence Tool access and training. Although the DRRS PM has procedures to inform the Services whether published messages were processed, users still observed data mismatches between the Service DRRS variants and DRRS-S, such as duplicate or out-of-date mission assessments. The Joint Staff and Services should improve existing policies and procedures to verify currency of data and to correct data mismatches between DRRS-S and the Service DRRS variants.
- DRRS-S is operationally survivable against a cyber threat with moderate capabilities. The DRRS PM corrected most cybersecurity vulnerabilities discovered in the Cooperative Vulnerability and Penetration Assessment phase of testing, and the Red Team could not exploit them during the Adversarial Assessment.

Recommendations

- Status of Previous Recommendations. The DRRS-S Program Office addressed all previous recommendations.
- FY16 Recommendations.
  1. The Joint Staff, Services, and DRRS PM should establish policy and procedures to periodically review reporting units in DRRS against the Service and Joint Staff sources for currency and accuracy. The DRRS PM should assess duplicate or out-of-date mission-essential tasks in DRRS-S and coordinate with the Services and Joint Staff to correct the data on a regular basis.
  2. The DRRS PM should improve training related to DRRS-S features, including business intelligence and quick search tools.
  3. The Air Force should provide additional training to Air Force Input Tool users.
  4. The DRRS PM should mitigate the vulnerabilities reported in the cybersecurity tests and conduct follow-on evaluations of cybersecurity.
  5. The Navy should review its policy and procedures for determining the measured resource levels to reduce the need for commander upgrades. The Navy should also provide guidance to commanders for relating the objective Mission Area Figure of Merit scores and measurement data, if current, to more objective Personnel (P), the equipment Readiness/serviceability (R), Supply/equipment on hand (S), and Training (T) (PRST) ratings.
  6. The Army should base the R-level calculation on equipment Readiness/serviceability using GCSS-Army readiness data when the system is fully fielded.
  7. The Marine Corps should work to keep logistics transactions current at the GCSS-Marine Corps hub. The Marine Corps should also auto-populate GCSS-Marine Corps business intelligence authoritative data into the DRRS-Marine Corps to assist units in data entry.