



## **INTERNAL AUDIT DIVISION**

### **REPORT 2019/078**

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#### **Audit of the Electronic Rations Management System**

**The system has improved rations  
management but some aspects need to be  
addressed**

**26 August 2019**

**Assignment No. AT2018/615/03**

# **Audit of the Electronic Rations Management System**

## **EXECUTIVE SUMMARY**

The Office of Internal Oversight Services (OIOS) conducted an audit of the Electronic Rations Management System (eRMS). The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes in ensuring the effective implementation and use of eRMS. The audit covered the period from January 2012 to March 2019 and included a review of risk areas which included governance, order management, performance management, quality management, and production support. The audit included a review of eRMS implementation in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) which is the largest mission providing rations to over 18,000 troops from 26 troop contributing countries deployed across 150 camp sites.

eRMS has provided some tangible benefits by automating order management, delivery management and invoice verification (including vendor's performance management). It has also enabled visibility over a number of performance parameters. However, some aspects relating to eRMS needed to be addressed.

OIOS made seven recommendations. To address issues identified in the audit, the Office of Information and Communications Technology (OICT) and the Department of Operational Support (DOS) needed to:

- Ensure that eRMS is appropriately configured to support multiple versions of United Nations rations standards;
- Analyze the financial impact of the inconsistent units of measurement in eRMS and ensure that eRMS is configured to apply consistent units of measurement across its interrelated components;
- Make the case for the resources required to implement the quality management module of eRMS as mandated in General Assembly resolution 65/289;
- Apply the upgrade patches to the Oracle database as a matter of priority, define critical activities and events for logging and monitoring, document standard operating procedures for system administration of eRMS with the third-party contractor, and evaluate the feasibility of encrypting the confidential data at rest; and
- Conduct a business impact analysis and a disaster recovery exercise as per defined recovery time objective and recovery point objective.

MONUSCO, needed to:

- Implement effective mechanisms to control the receipt, storage, classification and assignment of scanners; and
- Undertake an information security risk assessment on the use of public mobile networks for transmission of eRMS data and implement appropriate measures to protect the ICT infrastructure.

OICT, DOS and MONUSCO accepted the recommendations and have initiated action to implement them.

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# **Audit of the Electronic Rations Management System**

## **I. BACKGROUND**

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the Electronic Rations Management System (eRMS).
2. Between 2007 and 2015, the rations process was managed using the Excel-based Electronic Rations Management Tool (ERMT) which was primarily designed to assist in managing food orders and monitoring food delivery. ERMT was meant to be an interim tool until the implementation of eRMS.
3. The Secretary-General's report A/62/727 stated that the former Department of Field Support (DFS) – since reconstituted as the Department of Operational Support (DOS) – would complement the revision of the rations guidelines with the procurement of an off-the-shelf rations management system with software customization and a roll-out of the pilot system in one field mission. However, two consecutive procurement exercises for acquiring a commercial off-the-shelf rations management system failed.
4. In 2012, the Office of Information and Communications Technology (OICT) in collaboration with DFS, the Umoja Office and the Procurement Division, undertook a “proof of concept” using SAP technology and decided to proceed with developing eRMS.
5. eRMS seeks to leverage the Organization's investment on Umoja and iNeed technologies interfaced by a Java-based middleware. iNeed is used for authentication, authorization, and approval of workflows whereas the embedded Java application facilitates menu planning and feeding strength accounting. SAP performs core functions including the generation of bulk and final food order, performance management and invoice verification. iNeed also facilitates a web-based interface for military and police contingents and external vendors while SAP can only be accessed by rations office staff in missions. At the time of the audit, eRMS had been deployed to nine out of 12 missions including the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) which was the largest with more than 18,000 troops.
6. The 110,000 troops deployed in the 12 peacekeeping missions were supported with fresh food rations and composite rations for emergencies as per the United Nations Rations Scale and standards, which were updated in 2018. The global resource requirement for this service was approximately \$350 million annually.
7. The budget allocation (2015-2019) for the development of eRMS was \$3.4 million and the total expenditure incurred as of May 2019 was \$2.7 million.
8. Comments provided by OICT, DOS and MONUSCO are incorporated in italics.

## **II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY**

9. The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes in ensuring the effective implementation and use of eRMS.
10. This audit was included in the 2018 risk-based work plan of OIOS due to the risk that potential weaknesses or problems in eRMS may have an adverse impact on effective delivery of food rations to field missions.

11. OIOS conducted this audit from November 2018 to March 2019. The audit covered the period from January 2012 to March 2019. The audit was conducted at United Nations Headquarters, New York, the Enterprise Application Centre, Bangkok, and MONUSCO which is the largest mission providing rations to over 18,000 troops from 26 troop contributing countries deployed across 150 camp sites. Based on an activity-level risk assessment, the audit covered risk areas in the governance and management of eRMS which included governance, order management, performance management, quality management, and production support.

12. The audit methodology included: (a) interviews with key personnel and the service provider for SAP Business Application Software Integrated Solution (BASIS); (b) review of relevant documentation; (c) analytical review of data; (d) sample testing; and (e) site visit and physical observation at delivery points located in the premises of contingents, hospitals and the rations vendor's warehouses.

13. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

### **III. AUDIT RESULTS**

#### **A. Governance**

##### Benefits have been derived from the deployment of the eRMS

14. In September 2011, significant changes took place in rations operations as a result of General Assembly resolution 65/289 and the new United Nations rations standards which formalized the transition of rations operations to a full performance-based operation and led to the development of eRMS. The critical outputs of eRMS were menu planning, performance management, and internal controls to drive efficiencies and savings.

15. eRMS has provided some tangible benefits by automating order management, delivery management and invoice verification (including vendor's performance management). It has enabled visibility over a number of performance parameters such as vendor performance credits, savings in lieu of weekly discounts, authorized amount based on the approved ceiling-man/day rate (CMR), and final amount based on accepted CMR. Figures provided by OICT indicated that since 2015, eRMS had enabled efficiency gains in lieu of vendor performance credits and prompt payment discount of approximately \$6 million. Further, the Contract Management Unit in MONUSCO explained that prior to the implementation of eRMS, it took between one to three months to process invoices related to rations. Therefore, the mission could not take advantage of prompt payment discounts. However, the system could be further improved as described in the following paragraphs.

##### eRMS needs to enable multiple versions of the United Nations food rations standards

16. The rations system contracts were subject to multiple United Nations food rations standards. Consequently, some missions had different versions of the contract based on the applicable standard in effect. At the time of the audit, eRMS only supported Version 3 of the rations standards (i.e., food contracts in effect between August 2016 and February 2019). The system did not have adequate functionality for Version 4 of the rations standards (i.e. food contracts in effect from March 2019). Therefore, missions who entered into contracts based on Version 4 of the rations standards would not be able to use the system (e.g. the United Nations Mission in South Sudan, and the United Nations Mission for the Referendum in Western Sahara). This matter should be addressed to ensure the effective use of eRMS across all missions.

**(1) The Logistics Division of DOS, in collaboration with OICT, should ensure that eRMS is appropriately configured to support multiple versions of United Nations rations standards.**

*The Logistics Division of DOS accepted recommendation 1 and stated that DOS and OICT have already initiated the implementation of this recommendation. The UNMISS (United Nations Mission in South Sudan) contract will be implemented using an updated version of eRMS configured to support the revised version of the United Nations rations standards (v.2018). OICT confirmed that the required changes to support multiple versions of the United Nations rations standards have been developed and are currently being tested. Recommendation 1 remains open pending receipt of evidence that eRMS has been appropriately configured to support multiple versions of United Nations rations standards.*

## **B. Order management**

### Need to strengthen controls over management of eRMS hardware

17. ICT assets and inventory should be appropriately maintained to reduce their exposure to environmental threats, hazards, and unauthorized access.

18. Hand-held scanners were the main input devices used to capture transaction data into eRMS. OIOS noted that the provisioning and deprovisioning procedures for scanners (viz. inventory, storage, assignment and movement) were not adequately controlled, which resulted in the existence of duplicate scanners (scanners with the same serial numbers) in MONUSCO and 109 scanners registered as master data in eRMS, but not in MONUSCO's inventory.

19. This condition was due to the absence of adequate controls over the inventory of scanners which may result in their loss or misuse.

**(2) MONUSCO should implement effective mechanisms to control the receipt, storage, classification and assignment of scanners.**

*MONUSCO accepted recommendation 2 and stated that it has conducted 100 per cent physical verification of scanners and shared the reconciled data with the eRMS team to make necessary alignment with MONUSCO physical data. Recommendation 2 remains open pending receipt of evidence of the mechanisms implemented by MONUSCO to control the receipt, storage, classification and assignment of scanners.*

## **C. Performance management**

### Need to address the issue concerning inconsistent units of measurement

20. The "manage performance" module facilitates the administration of penalties/service level credits based on delivery performance metrics (calculated by eRMS based on pre-determined criteria) for each final food order placed by the Organization and supplied by the rations vendor. OIOS noted the use of inconsistent units of measurement applied to the same commodity in eRMS. For instance, food was ordered in volume (liters) but delivered in weight (kilograms). Since there was no conversion factor defined in eRMS for such commodities (i.e. liquids in general), the vendor was able to apply a different unit of measurement upon delivery, with a potential financial impact. OICT acknowledged this condition but stated that it would need to undertake further analysis to determine the financial impact. OIOS is of the view that OICT needs to study this issue and determine appropriate corrective action.

**(3) OICT, in collaboration with the Logistics Division of DOS, should analyze the financial impact of the inconsistent units of measurement in eRMS and ensure that eRMS is configured to apply consistent units of measurement across its interrelated components.**

*OICT accepted recommendation 3 and stated that DOS and OICT have initiated the implementation of this recommendation. Recommendation 3 remains open pending receipt of evidence of analysis of the financial impact of the inconsistent units of measurement in eRMS and configuration of eRMS to apply consistent units of measurement across its interrelated components.*

## **D. Quality management**

### Need to implement the quality management module

21. In paragraph 41 of its resolution 65/289, the General Assembly requested the Secretary-General to ensure that all missions monitor and evaluate the quality management systems of rations contractors to ensure that food quality and hygienic conditions are in accordance with established standards.

22. Accordingly, the Logistics Division, in collaboration with OICT, updated the eRMS business case to allow an enhancement to the existing system with a Quality Management module for managing and administering food standards and food safety. Although there have been several discussions about the implementation of the Quality Management module, no progress has been made in planning for its implementation due to resource limitations. OIOS noted the following in this regard:

(a) Missions found it difficult to adequately address performance issues relating to quality management of the food rations warehouses and the rations supplied by the vendor. Furthermore, OIOS learned that MONUSCO did not have the ability to track and identify batches of food rations that had already been supplied and which were later subject to recall due to quality concerns such as food contamination.

(b) The performance of the rations vendor and related performance metrics defined in the contract included seven parameters. However, only four performance parameters were functional in eRMS (i.e. conformity with delivery schedule, conformity with order by line items, conformity with order by weight, and food order compliance). The other three parameters (conformity with food stock requirements, implementation of the submitted/approved quality control programme, and conformity with United Nations rations standard specifications) were not measured in eRMS. This limited the mission's ability to effectively perform the tasks relating to stock management and cost efficiency.

23. OIOS is of the view that DOS needs to address the issue concerning resource limitations to implement the quality management module of eRMS. The case for the required resources could be made by highlighting the savings achieved from the efficiency gains brought about by eRMS. The absence of a robust quality management process fails to assure that missions are effectively implementing paragraph 41 of the General Assembly's resolution 65/289.

**(4) The Logistics Division of DOS, in collaboration with OICT, should make the case for the resources required to implement the quality management module of eRMS as mandated in General Assembly resolution 65/289.**

*The Logistics Division of DOS accepted recommendation 4 and stated that DOS shall reactivate the business case before the end of 2019 to secure resources for development and implementation of the*

*module.* Recommendation 4 remains open pending receipt of evidence of implementation of the quality management module of eRMS as mandated in General Assembly resolution 65/289.

## **E. Production support**

### Need to strengthen security-related production support activities

24. To ensure the effective and efficient performance of eRMS, system administration tasks (system support, installations, security, monitoring) and schedules need to be appropriately defined.

25. System administration services for eRMS were outsourced to a third-party contractor. OIOS noted the following in this regard:

(a) There was lack of segregation of duties. It is best practice to avoid assigning system administration duties and database administration duties to the same individual. In cases where it is unavoidable, compensating controls (such as review of logs and exception reports) should be in place to prevent abuse of the conflicting roles. For eRMS, the same individual was entrusted with both roles, which was a security concern as the system administrator can alter the database functions and disable the associated logs to prevent monitoring of these events. There were no compensating controls to mitigate the risks associated with the same individual performing both roles.

(b) Security patches had not been applied. At the time of the audit, upgrade patches had not been applied to the Oracle database (which is the database supporting SAP application) for more than a year, leaving it vulnerable to security incidents. OICT stated that the delay in applying the patches was due to resource limitations.

(c) Access privileges needed to be strengthened. Adequate change management procedures were not enforced to preserve the security and integrity of data. For instance, the 'SAP\_NEW' profile was granted on a temporary basis to facilitate upgrades to the system and should have been withdrawn once all upgrade activities were completed because of the role's extensive authorizations. However, the profile was not revoked after the system upgrades. Moreover, there were no procedures on how to manage change transports (workflows). Access to transport management was granted to the application developers as well, which was not optimal as this gap allowed a developer to transport changes without review into the production environment.

(d) Document management procedures were not defined for eRMS. This impacted controls over creation, versioning and security of documents. Furthermore, in the absence of document management procedures, the system may become overburdened with documents and affect system performance. The data held in the Oracle database was only encrypted in transit; the data was not encrypted at rest.

(e) Access to special functions and monitoring of critical activities and logs needed to be effectively controlled. There were no defined procedures for ensuring restricted access to special functions and programs in eRMS, which should be based on a "need to have" basis. OIOS noted instances whereby access had been granted to special functions and programs, including service accounts, to make direct changes to the production client and special transaction codes that could impact the integrity of the system. Also, there were no procedures for logging and monitoring of critical activities (user activities, exceptions, faults and information security events).

(f) Public network was used for communication. Some MONUSCO food delivery points used mobile wifi devices across public networks for transmitting rations-related data to the Organization's ICT



infrastructure. But the risks associated with the use of public networks for such communication was not assessed and mitigated. This poses a security risk to the Organization's infrastructure (such as malware attacks) since it allowed the devices to connect without authentication.

- (5) OICT should: (i) ensure that it applies the upgrade patches to the Oracle database as a matter of priority; (ii) define critical activities and events for logging and monitoring; (iii) document standard operating procedures for system administration of eRMS with the third-party contractor; and (iv) evaluate the feasibility of encrypting the confidential data at rest.**

*OICT accepted recommendation 5 and stated that: (i) appropriate version of upgrade patch has been applied to development environment of eRMS and is scheduled to be implemented in the production environment by the end of the first quarter of 2020; (ii) a list of critical activities and events for logging and monitoring will be defined; (iii) a consolidated Standard Operating Procedure for administration of eRMS with the third-party contractor will be established; and (iv) the feasibility of encrypting the confidential data at rest will be evaluated. Recommendation 5 remains open pending receipt of evidence that it has been fully implemented.*

- (6) MONUSCO Field Technology Service should undertake an information security risk assessment on the use of public mobile networks for transmission of eRMS data and implement appropriate measures to protect the ICT infrastructure.**

*MONUSCO accepted recommendation 6 and stated that the Information Security Unit of the Field Technology Service will conduct a security risk assessment on usage of public mobile networks for the transmission of eRMS data. Recommendation 6 remains open pending receipt of evidence that a security risk assessment on usage of public mobile networks for transmission of eRMS data has been undertaken and appropriate measures have been implemented.*

#### Need to finalize business impact analysis and conduct disaster recovery exercise for eRMS

26. A business continuity plan describes how an organization will continue its operations in response to adverse events. The plan should be based on a business impact analysis and include instructions defining the actions required by all responsible parties for ensuring the continuity of operations under adverse conditions. The business continuity plan should also inform the ICT recovery plan.

27. The Logistics Division was yet to conduct a business impact analysis to identify eRMS business continuity requirements and priorities in the event of a significant disruption. Further, the recovery time objective (RTO, or the time it takes for a business process to be restored after a disaster or disruption) and recovery point objective (RPO, which is the maximum tolerable period in which data might be lost due to a major incident) for the critical processes were not defined.

28. The last disaster recovery exercise was conducted back in July 2015. Further, even though the July 2015 exercise did not meet the set RTO, the exercise was not re-performed. There were inconsistencies in the defined periodicity for the disaster recovery exercise and RPO timelines as shown in Table 1 below:

**Table 1: Inconsistency in periodicity of disaster recovery exercise and determination of RPO and RTO**

<b>Periodicity of disaster recovery exercise</b>		
2018 eRMS Service Level Agreement with Logistics Division - Paragraph 6.4	Once every year	
2018 eRMS Service Level Agreement with Logistics Division - Paragraph 7.2	Every two years	

  

<b>Determination of RTO and RPO</b>	<b>RTO</b>	<b>RPO</b>
eRMS and iNeed DR Exercise conducted in 2015	4 hours	15 minutes
2018 eRMS Service Level Agreement with LD- Paragraph 7.2	4 hours	24 hours

29. Deficiencies in disaster recovery preparedness could lead to failure in timely recovery and unavailability of eRMS which is a critical system.

**(7) The Logistics Division of DOS should: (i) conduct a business impact analysis for defining the business continuity plan for eRMS; (ii) define the recovery time objective and recovery point objective which should serve as a basis for the ICT recovery plan; and (iii) conduct a disaster recovery exercise for eRMS.**

*The Logistics Division of DOS accepted recommendation 7 and stated that it will finalize the business continuity plan with the goal of conducting a business impact analysis and a disaster recovery exercise together with OICT. Recommendation 7 remains open pending receipt of evidence of that a business impact analysis and disaster recovery exercise have been conducted for eRMS.*

#### **IV. ACKNOWLEDGEMENT**

30. OIOS wishes to express its appreciation to the management and staff of OICT, DOS and MONUSCO for the assistance and cooperation extended to the auditors during this assignment.

(Signed) Eleanor T. Burns  
 Director, Internal Audit Division  
 Office of Internal Oversight Services

## STATUS OF AUDIT RECOMMENDATIONS

## Audit of the Electronic Rations Management System

Rec. no.	Recommendation	Critical <sup>1</sup> / Important <sup>2</sup>	C/ O <sup>3</sup>	Actions needed to close recommendation	Implementation date <sup>4</sup>
1	The Logistics Division of DOS, in collaboration with OICT, should ensure that eRMS is appropriately configured to support multiple versions of United Nations rations standards.	Important	O	Receipt of evidence that eRMS has been appropriately configured to support multiple versions of United Nations rations standards.	31 March 2020
2	MONUSCO should implement effective mechanisms to control the receipt, storage, classification and assignment of scanners.	Important	O	Receipt of evidence of the mechanisms implemented by MONUSCO to control the receipt, storage, classification and assignment of scanners.	31 December 2019
3	OICT, in collaboration with the Logistics Division of DOS, should analyze the financial impact of the inconsistent units of measurement in eRMS and ensure that eRMS is configured to apply consistent units of measurement across its interrelated components.	Important	O	Receipt of evidence of analysis of the financial impact of the inconsistent units of measurement in eRMS and configuration of eRMS to apply consistent units of measurement across its interrelated components.	31 March 2020
4	The Logistics Division of DOS, in collaboration with OICT, should make the case for the resources required to implement the quality management module of eRMS as mandated in General Assembly resolution 65/289.	Important	O	Receipt of evidence of implementation of the quality management module of eRMS as mandated in General Assembly resolution 65/289.	30 June 2021
5	OICT should: (i) ensure that it applies the upgrade patches to the Oracle database as a matter of priority; (ii) define critical activities and events for logging and monitoring; (iii) document standard operating procedures for system administration of eRMS with the third-party contractor; and (iv) evaluate the feasibility of encrypting the confidential data at rest.	Important	O	Receipt of evidence that the recommendation has been fully implemented.	30 June 2020

<sup>1</sup> Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

<sup>2</sup> Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

<sup>3</sup> C = closed, O = open

<sup>4</sup> Date provided by OICT, DOS and MONUSCO in response to recommendations.

## STATUS OF AUDIT RECOMMENDATIONS

### Audit of the Electronic Rations Management System

6	MONUSCO Field Technology Service should undertake an information security risk assessment on the use of public mobile networks for transmission of eRMS data and implement appropriate measures to protect the ICT infrastructure.	Important	O	Receipt of evidence that a security risk assessment on usage of public mobile networks for transmission of eRMS data has been undertaken and appropriate measures have been implemented.	31 December 2019
7	The Logistics Division of DOS should: (i) conduct a business impact analysis for defining the business continuity plan for eRMS; (ii) define the recovery time objective and recovery point objective which should serve as a basis for the ICT recovery plan; and (iii) conduct a disaster recovery exercise for eRMS.	Important	O	Receipt of evidence of that a business impact analysis and disaster recovery exercise have been conducted for eRMS.	31 March 2020

# **APPENDIX I**

## **Management Response**

United Nations  Nations Unies

INTEROFFICE MEMORANDUM

MEMORANDUM INTERIEUR

TO: Mr. Gurpur Kumar  
A: Deputy Director, Internal Audit Division  
Office of Internal Oversight Services

DATE: 2 August 2019

THROUGH: Olga de la Piedra, Director  
S/C DE: Office of the Under-Secretary-General  
Department of Management Strategy, Policy and Compliance



FROM: Mario Baez, Chief, Accountability Service  
DE: Business Transformation and Accountability Division  
Department of Management Strategy, Policy and Compliance



SUBJECT: **Draft report on an audit of the Electronic Rations Management System**  
OBJET: **(Assignment No. AT2018/615/03)**

1. We refer to your memorandum dated 17 July 2019 regarding the above-mentioned draft report and provide you with the coordinated comments from the Office of Information and Communications Technology (OICT) and the Department of Operational Support (DOS) in the attached Appendix I.
2. Thank you for giving us the opportunity to provide comments on the draft report.

**Management Response**  
**Audit of the Electronic Rations Management System**

Rec. no.	Recommendation	Critical <sup>1</sup> / Important <sup>2</sup>	Accepted? (Yes/No)	Title of responsible individual	Target date	Client comments
1	The Logistics Division of DOS, in collaboration with OICT, should ensure that eRMS is appropriately configured to support multiple versions of United Nations rations standards.	Important	Yes	Chief, Sourcing Support Service Logistics Division, Office of Supply Chain Management, DOS	31 March 2020	Comments by DOS are reflected in the report.
2	MONUSCO should implement effective mechanisms to control the receipt, storage, classification and assignment of scanners.	Important				
3	OICT, in collaboration with the Logistics Division of DOS, should analyze the financial impact of the inconsistent units of measurement in eRMS and ensure that eRMS is configured to apply consistent units of measurement across its interrelated components.	Important	Yes	Chief, Enterprise Solutions Service, OICT	31 March 2020	Comments by OICT are reflected in the report.
4	The Logistics Division of DOS, in collaboration with OICT, should make the case for the resources required to implement the quality management module of eRMS as mandated in General Assembly	Important	Yes	Chief, Sourcing Support Service, Logistics Division, Office of Supply Chain Management, DOS	30 June 2021	Comments by DOS are reflected in the report.

<sup>1</sup> Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided regarding the achievement of control and/or business objectives under review.

<sup>2</sup> Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

## Management Response

## Audit of the Electronic Rations Management System

Rec. no.	Recommendation	Critical <sup>1</sup> / Important <sup>2</sup>	Accepted? (Yes/No)	Title of responsible individual	Target date	Client comments
	resolution 65/289.					
5	OICT should: (i) ensure that it applies the upgrade patches to the Oracle database as a matter of priority; (ii) define critical activities and events for logging and monitoring; (iii) document standard operating procedures for system administration of eRMS with the third-party contractor; and (iv) evaluate the feasibility of encrypting the confidential data at rest.	Important	Yes	Chief, Enterprise Solutions Service, OICT	30 June 2020	Comments by OICT are reflected in the report.
6	MONUSCO Field Technology Service should undertake an information security risk assessment on the use of public mobile networks for transmission of eRMS data and implement appropriate measures to protect the ICT infrastructure.	Important				
7	The Logistics Division of DOS should: (i) conduct a business impact analysis for defining the business continuity plan for eRMS; (ii) define the recovery time objective and recovery point objective which should serve as a basis for the ICT recovery plan; and (iii) conduct a disaster recovery exercise for eRMS.	Important	Yes	Chief, Sourcing Support Service, Logistics Division, Office of Supply Chain Management, DOS	31 March 2020	Comments by DOS are reflected in the report.





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**INTEROFFICE MEMORANDUM**

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09 August 2019  
Ref

To: Mr. Gurpur Kumar, Deputy Director  
Internal Audit Division, OIOS

From: *for* Leila Zerrougui *DOBreeg*  
Special Representative of the Secretary-General

**Subject: Mission Response to Draft Report on the audit of the Electronic Rations  
management System (Assignment No. AT2018/615/03)**

1. Your interoffice memorandum reference OIOS-2019-01591 dated 17 July 2019 refers.
2. Attached please find the Mission's response in respect of the recommendations in the Draft Report of the subject audit.

Kind regards.

Cc Ms. Lisa Buttenheim, Assistant Secretary-General, Department of Operational Support  
Ms. Atefeh Riazi, Assistant Secretary-General, OICT  
Ms. AnneMarie van den Berg, Director, Logistics Division, DOS  
Mr. Salem Avan, Director, Information Systems and Technology, OICT  
Mr. Ebrima Ceesay, Director of Mission Support, MONUSCO  
Ms. Judith Atiagaga, Audit Focal Point, MONUSCO  
Ms. Luminita Cuna, Audit Focal Point, OICT  
Mr. Henri Fourie, Chief, Audit Response Unit, DOS  
Mr. Zachary Ikiara, Chief, Oversight and Coordination Support Unit, DMSPC  
Ms. Cynthia Avena-Castillo, Professional Practices Section, Internal Audit Division, OIOS

Attachment: Appendix I - Management Response

## Management Response

## Audit of the Electronic Rations Management System

Rec. no.	Recommendation	Critical <sup>1</sup> / Important <sup>2</sup>	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	The Logistics Division of DOS, in collaboration with OICT, should ensure that eRMS is appropriately configured to support multiple versions of United Nations rations standards.	Important				
2	MONUSCO should implement effective mechanisms to control the receipt, storage, classification and assignment of scanners.	Important	Yes	Chief, Life Support Section	31 December 2019	MONUSCO has conducted 100% physical verification of the scanners and reconciled the data. The same has been shared with ERMS team to make necessary alignment with MONUSCO physical data.
3	OICT, in collaboration with the Logistics Division of DOS, should analyze the financial impact of the inconsistent units of measurement in eRMS and ensure that eRMS is configured to apply consistent units of measurement across its interrelated components.	Important				
4	The Logistics Division of DOS, in collaboration with OICT, should make the case for the resources required to implement the quality management module of eRMS as mandated in General Assembly resolution 65/289.	Important				
5	OICT should: (i) ensure that it applies the upgrade patches to the Oracle database as a matter of priority; (ii) define critical activities and events for logging and	Important				

<sup>1</sup> Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

<sup>2</sup> Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

## Management Response

## Audit of the Electronic Rations Management System

Rec. no.	Recommendation	Critical <sup>1</sup> / Important <sup>2</sup>	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
	monitoring; (iii) document standard operating procedures for system administration of eRMS with the third-party contractor; and (iv) evaluate the feasibility of encrypting the confidential data at rest.					
6	MONUSCO Field Technology Service should undertake an information security risk assessment on the use of public mobile networks for transmission of eRMS data and implement appropriate measures to protect the ICT infrastructure.	Important	Yes	Chief, Field Technology Service	31 December 2019	MONUSCO accepts the recommendation. Information Security Unit of FTS will conduct a security risk assessment on the usage of public mobile networks for the transmission of eRMS data by 30 September 2019. FTS will also ensure appropriate measures are in place to protect the ICT infrastructure by 31 December 2019.
7	The Logistics Division of DOS should: (i) conduct a business impact analysis for defining the business continuity plan for eRMS; (ii) define the recovery time objective and recovery point objective which should serve as a basis for the ICT recovery plan; and (iii) conduct a disaster recovery exercise for eRMS.	Important				