

AUDITOR-GENERAL'S REPORT



On the Assurance Audit of the Integrated Financial Management Information System (IFMIS) of the Ministry of Finance & Development Planning (MFDP), July 1, 2017 – December 31, 2020.

November 2020

Yusador S. Gaye CPA, CGMA Auditor-General, Republic of Liberia

Table of Contents

| 1 | DETAIL | ED FINDINGS AND RECOMMENDATIONS | 18 |
|---|---------|--|----|
| | 1.1 IFI | MIS Network Security Management | 18 |
| | 1.1.1 | Inadequate placement of the firewall and Demilitarized Zone (DMZ) | 18 |
| | 1.1.2 | End of Life Computing of Network Equipment | 19 |
| | 1.1.3 | User Credential in clear text | 20 |
| | 1.1.4 | Unresolved issues on the console log | 21 |
| | 1.1.5 | Lack of baseline security documentation | 22 |
| | 1.1.6 | No evidence to confirm review of logs on network devices | 23 |
| | 1.1.7 | Non configuration of Policies on the Active Directory | 24 |
| | 1.1.8 | Improper configuration Setting of the Domain Controller | 25 |
| | 1.1.9 | Open Ports with legitimate Services | 27 |
| | 1.1.10 | Improper configuration of the Domain Name System (DNS) | 27 |
| | 1.1.11 | Database Security Management | 28 |
| | 1.1.12 | Unrestricted Super User's Privileges | 29 |
| | 1.1.13 | Lack of database performances monitoring tools | 30 |
| | 1.1.14 | Password Expiration Not Enforce at the Application Level | 31 |
| | 1.1.15 | System Administrator (SA) Account not Rename | 31 |
| | 1.1.16 | Using Default Port | 32 |
| | 1.2 En | suring Security of Business Processes Management | 33 |
| | 1.2.1 | Inadequate security awareness program | 33 |
| | 1.2.2 | Inadequate user access revocation procedures | 33 |
| | 1.2.3 | Inadequate controls over standing data maintenance | 34 |
| | 1.2.4 | Budget preparation not performed on IFMIS | 36 |
| | 1.2.5 | No approval process for additions to the vendor listing | 37 |
| | 1.2.6 | CSM module not used for payroll processing for all Ministries and Agencies | 37 |
| | 1.2.7 | Lack of Approved IFMIS Manual | 39 |
| | 1.2.8 | Roll-out Ministries and Agencies are not utilizing IFMIS | 40 |
| | 1.2.9 | Password Sharing | 41 |
| | 1.2.10 | Failure to Deactivate Users Accounts | 42 |
| | 1.3 PR | OGRAM CHANGE MANAGEMENT | 43 |
| | 1.3.1 | Lack of change management policy | |
| | 1.4 Inf | formation Technology Governance | |
| | 1.4.1 | Lack of IT Steering Committee | |
| | 1.4.2 | IT Strategic Committee/Meeting Minutes | |
| | 1.4.3 | Plan, Educate and Train ICT Staffs | |
| | 1.4.4 | Lack of information system auditors and Risk Assessment tools | 47 |

| 1.4.5 | Inadequate Segregation of IT duties and functions | 48 |
|------------------|--|----|
| 1.4.6 | Service Level Agreement (SLA) | 49 |
| 1.4.7 | ICT Unit not fully structured | 49 |
| 1.4.8 | Lack of Redundant power supply at the Mini data center | 50 |
| 1.4.9 | No Redundant Internet Connection Mini data center | 51 |
| 1.4.10 | Lack of annual budgeting of the ICT Unit | 52 |
| 1.5 La | ck of Automated Interface Between IFMIS & Others Systems | 53 |
| 1.5.1 | Lack of automated interface between IFMIS and other applications | 53 |
| 1.5.2 | Lack of automated reconciliation | 53 |
| 1.5.3 | Inability of end users to attach documents on IFMIS | 54 |
| 1.6 IT | SERVICE CONTINUITY | 55 |
| 1.6.1 | Threat to Business Continuity | 55 |
| 1.6.2 | Inadequate data backup and recovery procedures | 56 |
| 1.7 In | cident and Problem Management | 57 |
| 1.7.1 | Ineffective issue resolution/management controls | 57 |
| 1.8 En | vironmental Controls | 58 |
| 1.8.1 | Inadequate environmental security controls at the data centers | 58 |
| 1.8.2 | Lack of Safety Equipment's | 59 |
| 1.9 Re | porting Requirements and Capabilities | 60 |
| 1.9.1 | IFMIS Reports not optimally utilized by end users | |
| 1.9.2 | Inadequacy Coding Block | 61 |
| 1.10 Ve | rification of IFMIS been Used Remotely in Four Counties | 62 |
| 1.10.1 | Inadequate Segregation of Duty (SOD) | |
| 1.10.2 | System Availability | 63 |
| 1.10.3 | User Account and Password Sharing | 64 |
| 1.10.4 | Lack of Training to Remote users of the System | 65 |
| 1.10.5 | No Assigned Account for users with responsibility on the system | 66 |
| 1.10.6 | Computer not on MFDP Domain | 66 |
| 1.10.7 | Purchase orders not processed on IFMIS by some MACs: | 67 |
| 1.10.8 | IFMIS Environment Unprotected Remotely | 68 |
| Prior Yea | r's Audit Matter | 69 |
| | | |

ACRONYM

| ACRONYM | Meaning |
|--------------|--|
| | - |
| AG M&A's | Auditor General |
| M&A S GOL | Ministries and Agencies Government of Liberia |
| | |
| SSL | Secure Sockets Layer |
| TLS | Transport Layer Security |
| CBL | Central Bank of Liberia |
| SIDA | Swedish International Development Cooperation Agency |
| CIS | Center for Internet Security |
| COBIT | Control Objectives of Information Technology |
| CPA | Certified Public Accountant |
| URL | Uniform Resource Locator |
| HTML | Hypertext Markup Language |
| HTTPS | Hypertext Transfer Protocol Secure |
| GAC | General Auditing Commission |
| MAAC | Ministries, Agencies, Authorities and Commission |
| IAS | International Auditing Standards |
| IFMIS | Integrated Financial Management Information System |
| DMZ | Demilitarized Zone |
| EVs | Expense Vouchers |
| IS | Information System |
| ISACA | Information System Audit Control Association |
| IP | Internet Protocol |
| IT | Information Technology |
| AN | Wide Area Network |
| LAN | Local Area Network |
| SIEM | Security information and event management |
| CMFAU | Cash Management & Financial Approval Unit |
| MFDP | Ministry of Finance & Development Planning |
| CSA | Civil Services Agency |
| MOA | Ministries of Agriculture |
| PO | Purchase order |
| SLA | Service Level Agreement |
| LEC | Liberia Electricity Corporation |
| SAI | Supreme Audit Institution |
| SIGTAS | Standard Integrated Government Tax Administration System |
| SOD | Segregation of duties |
| TCP | Transmission Control Protocol |
| ASU | Accounting Services Unit |
| EDMS | Electronic Document Management System |
| F | • |



| AC | Alternating Current |
|----------|---|
| TSU | Treasury Services Unit |
| EDP | Electronic Data Processing |
| PB | Performance Budgeting |
| DMB | Deputy Minister for Budget |
| AMB | Assistant Minister for Budget |
| LIBTELCO | Liberia Telecommunication Corporation |
| NDC | National Data Center |
| DoS | Denial of Service |
| DS | Directory Service |
| CPU | Central Processing Unit |
| SQL | Structured Query Language |
| DBA | Database Administrator |
| SA | System Administrator |
| FMO | Financial Management Officer |
| CSM | Civil Service Management |
| FAS | Financial Accountability Suite |
| EPA | Environmental Protection Agency |
| MOE | Ministry of Education |
| CSA | Civil Service Agency |
| SLA | Service Level Agreement |
| LEC | Liberia Electricity Corporation |
| ICT | Information & Communication Technology |
| LRA | Liberia Revenue Authority |
| ASYCUDA | Automated System for Customs Data |
| TAS | Tax Administration System |
| CS-DRMS | Commonwealth Secretariat Debt Recording Management System |
| ВСР | Business Continuity Plan |
| DRP | Disaster Recovery Plan |
| GFS | Government Finance Statistics |
| SOD | Segregation of Duty |
| MOH | Ministry of Health |
| MIA | Ministry of Internal Affairs |
| CHT | County Health Team |
| NACP | National Aids Control Program |
| BMS | Budget Management System |
| TCP/IP | Transmission Control Protocol/ Internet Protocol |

Glossary of Terms

| Terms Used | Application definition |
|-------------------|--|
| Audit Evidence | Is information, object or action used by the auditor in arriving at the conclusion |
| | on which to base the audit assessment |
| Audit Finding | Is the specific evidence gathered by the auditor to satisfy the audit objective |
| Audit Methodology | Is consider as the procedure(s) used in executing an audit |
| Audit Scope | The boundary and sometimes time-frame of the audit |
| Availability | Is the guarantee of reliable access to the information by authorized people? |
| Confidentiality | Is a set of rules that limits access to information |
| Criticality | Very important data |
| Integrity | Is the assurance that the information is trustworthy and accurate |
| Sensitivity | Important information |



Republic of Liberia



The Honorable Speaker of the House of Representatives, and the President Pro Tempore of the House of Senate:

We are pleased to publish and publicize this Liberia Intergraded Financial Management Information System (IFMIS) audit report which examined the performance of the Automated System IFMIS, to enhance public expenditure management processes, improve greater accountability and transparency across Ministries and Agencies. The Free balance Accountability Suit comprising three main modules; Performance Budgeting (PB), Financial Accountability (FA), and Civil Service Management (HRMIS and Payroll) and system went 'live' on 1 July 2011, respectively.

The audit was carried under Section 2.1.3(a) of the General Auditing Commission Act of 2014 which states that the Auditor General shall carry out such audit and inquiries as he/she considers necessary of public entities and funds owned or controlled by Government to enable reporting as required by this Act.

In line with this mandate, we have conducted a compliance IS/IT audit at the Ministry of Finance & Development Planning (MFDP). The examination of the management's control within an Information Technology (IT) infrastructure. The evaluation evidence determines if the information systems are safeguarding assets, maintaining data integrity, and operating effectively to achieve Government's goal and objective. See that the IFMIS is core to the operations of the Government of Liberia accountability structure, it was deemed necessary and vital to perform a comprehensive audit of the system and application to assess its effectiveness in meeting the needs of the government; provide assurance on the effective use of public resources; and promote delivery of public services to Liberians.

The audit covers six (6) areas, namely;

- Security Management review: to identify the organization's assets including people, buildings, machines, systems and information assets, followed by the development, documentation, and Implementation of policies and procedures for protecting assets.
- System Implementation: to evaluate functionalities and systems design of the information system, to ensure that the information system is operational and properly used to meets quality standards.



- IT Governance and General Controls Review: Given that IFMIS strengthen many processes, which include tone at the top and how IT supports the current and future needs of the Government of Liberia.
- Business Process Review: a review of the business processes supported by the MFDP and the systems platform is essential. This includes an evaluation of related application controls for design and operational effectiveness.
- Infrastructure Assessment: The IT infrastructure review evaluates the efficiency and assesses the reliability of the infrastructure components that support the IFMIS platform.
- Business Continuity Planning (BCP) is the process of evaluating the MFDP, if they are able to function after natural disaster; which includes process that involved in creating a system of prevention and recovery from potential threats to the IFMIS Systems.

Yusador S. Gaye, CGMA, CPA Auditor General R.L.

Monrovia, Liberia November 2020



Summary of Key Findings and Observations

We have analyzed each of the IT audit findings and, for the purposes of this report, summarized the findings into the 10 review areas. The following table provide a high-level summary of the IT audit findings per each review area. For a more detailed breakdown and description of the findings, please see the Detailed Findings and Recommendations sections of each review area in this report.

| Review Area | Number of Findings |
|--|--------------------|
| IFMIS network & database security management | 16 |
| Ensuring security of business process management | 10 |
| Program change management | 1 |
| Information technology governance | 10 |
| Lack of automated interface between IFMIS & others systems | 3 |
| IT service continuity | 2 |
| Incident and problem management | 1 |
| Environmental controls | 2 |
| Reporting Requirements and Capabilities | 2 |
| Verification of IFMIS been Used Remotely in Four Counties | 8 |
| Total | 55 |

Significant Findings

FMIS network & database security management

Inadequate placement of the firewall and Demilitarized Zone (DMZ)

IFMIS network's perimeter security not adequately secured The IFMIS network architecture is poorly setup. The current network architecture offers minimal protection to the IFMIS network. Additionally, all webservers for external access to the IFMIS application are kept internally within the IFMIS network instead of a de-militarized zone (DMZ). This exposes the internal network to external attacks.

End of Life Computing of Network Equipment

The review of the IFMIS infrastructure revealed several deficiencies, including outdated / end of life physical devices for the IFMIS application. These end of life devices have not been upgraded since their installation and increases the risk of security related attacks since vendors periodically provide security patches to address weakness in the operation system.

User Credential in clear text

The internal URL to access the IFMIS application is not secured. Users using the local URL are transmitting data unencrypted. Anyone within the local area network using a network sniffer tool is able to capture sensitive information including IFMIS users' usernames and passwords. We captured usernames and password for one administrator account and one read only user account. Once a super user credentials have been compromised, all sorts of activities and transactions can be performed within the IFMIS system.



Lack of baseline security documentation

IFMIS network do not have a baseline security policy in place to provide security measure of the network infrastructure. The IFMIS network plays a critical role in the success of the financial management of all GOL institutions. Network baseline is a set of metrics that describe normal operating parameters.

Ensuring Security of Business Processes Management

Inadequate security awareness program

There was no evidence of IT security awareness training for all IFMIS users across the various Ministries and Agencies (M&A's). Moreover, there was no ongoing program to ensure all IFMIS users remain aware of their security responsibilities

Inadequate user access revocation procedures

there were no formal or timely process for notifying the system administrator of employees leaving employment or changing positions. Moreover, there is no formal process for managing user access removal on other IFMIS infrastructures (databases and operating systems).

Inadequate controls over standing data maintenance

It was noted that system enforced authorizations are not required for upload and/or modification to the following standing data:

- Budget uploads into IFMIS- once the budget data is uploaded by the FMO, the budget lines
 on IFMIS are updated without being transitioned to a superior management staff for review
 and approval in the system;
- Vender/supplier master data vender addition/modifications by the IFMIS system administrator does not require system approval by a second person.

Budget preparation not performed on IFMIS

The GoL budget is prepared in a separate application called Budget Management System (BMS). The application does not interface with IFMIS. Thus, after budget preparation, the budget data is extracted from BMS by the budget development specialist and manually uploaded into IFMIS by a Financial Management Officer (FMO). Manual intervention is involved in populating the budget information in the form that will enable the upload of the data into IFMIS.

No approval process for additions to the vendor listing

It was noted that there is no approved documentation from the heads of the Institution or the procurement directors that authorized the addition of the vendor under the Ministry or Agency.

Lack of change management policy

There is no defined change management process or procedure. Consequently, modifications to the IFMIS application and infrastructures are not tracked/logged. Patches obtained from the vendor are tested on the test environment and applied to the production environment without any evidence of the tests performed, users' involvement and business approvals. Also, changes can be developed, tested, and moved by the same person as access to the different environments has not been segregated.



CSM module not used for payroll processing for all ministries and agencies

The CSM module on IFMIS is currently used to process the payroll of only civil service institutions and not all Government institutions. The payrolls of autonomous institutions, restructured organizations and state-owned entities are processed outside IFMIS.

Furthermore, the Civil Service Agency (CSA) is responsible for placing government retirees unto the pension payroll based on requests sent by government institutions when staff are due for retirement. However, there are instances where retirees on the pension payroll gain employment in an autonomous, restructured or state-owned institution and the CSA is unaware to remove the person from pension payroll as those institutions do not maintain their regular payroll on IFMIS.

Such persons would therefore remain on both government pension payroll and the regular payroll of their new institutions until their retirement is due and those institutions make a request to CSA to add those persons to the pension payroll. It is only at this point that the CSA would be able to detect that they already exist on the pension payroll.

Information Technology Governance

- It was noted that the MFDP had not established an IT steering committee to deal with IT matters.
- there was no evidence of an IT strategy Committee meeting minutes to signify that the Ministry of Finance & Development Planning (MFDP) had established an IT strategy committee to address the operations of the IT control environment and provide strategic directions.
- It was noted that there was no training plan in place for IT staffs that carryout the daily IT operation of IFMIS
- It was noted that the internal audit unit does not have train IT auditors to perform IT risk assessment, to identify and analyze information system risks. Furthermore, there are no tools available to assess IS/IT equipment in identifying vulnerabilities that will exploit the IFMIS systems and IT environment.
- It was observed that management has not adequately embedded segregation of duties in the structure of the IFMIS support team to ensure that the units are well structured and have different functions.
- It noted that there were no contractual agreements or a service level agreement (SLA) between MFDP and LIBTELCO to host the data center. The main data center and the National data center that host the new environment of IFMIS are located on the premises of LIBTELCO.
- MFDP/IFMIS do not have suitable interruptible supply equipment moreover there were no power backup such, (e.g., batteries, generators) to support business continuity.
- There is no alternative or redundant internet service provider for the IFMIS Mini data center. Alternative internet connection will ensure IFMIS accessibility over the internet at all-time.



• It was noted that the ICT unit dose not prepare its own budget to reflect annual operational to identify expected IT/IS cost.

Lack of automated interface between IFMIS and other GOL Systems

Revenue generated by the Liberia Revenue Authority (LRA) and recorded in Tax Administration System (TAS) are uploaded into IFMIS through a Structured Ouery Language (SOL) interface. The interface is not automated and involves manual extraction of revenue transactions from TAS and importing of the data into IFMIS. Also, government borrowings are recorded by the Debt Management Unit using the Commonwealth Secretariat Debt Recording Management System (CS-DRMS). However, there is no interface between the CS-DRMS and IFMIS to capture information on loans obtained for direct budgetary support.

Lack of automated reconciliation

It was noted that the reconciliations unit at MFDP prepares bank reconciliations manually, although IFMIS has the functionality to perform automated bank reconciliations. This was attributed to the inability of the current IFMIS version (7.0) to interface with the software used by the Central Bank of Liberia (CBL).

Threat to Business Continuity

Evidence of supervisory review to confirm that IFMIS backups were duly performed as required could not be obtained. Moreover, there was no formal policy in place for backup restoration tests. Backup restorations were carried out on an event driven basis. Inadequate disaster recovery controls There was no IT disaster recovery plan. Moreover, there was no off-site storage of IFMIS data as an offsite location or secondary data center had not been identified by the GoL. In the event of a disaster relating to damage of the primary data center equipment such as servers, storage devices or network devices, the GoL may not be able to bring IFMIS back to its normal operation.

Inadequate data backup and recovery procedures

It was also noted that there were no periodic or regular testing of the backup files that are performed and certified by the owners of the information stored, and the ability to restore complete and accurate data in the case of emergency.

Status of Implementation of Prior Year Audit Recommendations

| Status | Numbers of Findings | Percentage |
|-----------------------|---------------------|------------|
| Implemented | 1 | 1.9 |
| Partially Implemented | 8 | 15.6 |
| Not Implemented | 42 | 82 |
| Total | 51 | 100 |



Introduction

The audit was conducted under the General Auditing Commission (GAC) Act of 2014, Section 2.1.3, which mandates the Auditor-General (AG) to be the auditor of the public accounts and public funds of the Republic of Liberia.

The audit was undertaken to evaluate the System Assurance of the INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEM (IFMIS) of the Ministry of Finance & Development Planning (MFDP) and serves as a follow-up audit covering fiscal years July 1, 2010-June 30, 2017.

Legal and Regulatory Framework

The implementation of IFMIS emanated from the enactment of the PFM Law in August 2009 and subsequent development of the PFM Reform Strategy and Action Plan (RS&AP) which highlighted the deployment of a robust information system to provide support to all PFM transactions and operation, together with timely, reliable and comprehensive reports at all levels. The PFM RS&AP also proposed the establishment of interfaces with key applications used in various government parastatals under the Ministry of Finance and Development Planning.

The Ministry of Finance and Development Planning, or MFDP for short, was established in 2013 by an Act of the National Legislature section 21.2, in line with international financial management best practices. The new MFDP effectively replaces the Ministry of Finance and the Ministry of Planning and Economic Affairs, with the mandate to formulate, institutionalize and administer economic development, fiscal and tax policies for the promotion of sound and efficient management of financial resources of the government.

Background

The Government of Liberia (GOL) Integrated Financial Management Information System (IFMIS) with funding from the World Bank, the Swedish International Development Cooperation Agency (SIDA) and the African Development Bank (ADB) implemented an integrated Financial Management Information System (IFMIS) to enhance public expenditure management processes, improve greater accountability and transparency across Ministries and Agencies. In this endeavor, a phased implementation approach has been adopted.

The current GOL IFMIS solution has been upgraded from version 6.5e to 7.0e of the Freebalance Accountability Suit comprising the following modules; Performance Budgeting (PB), Financial Accountability (FA), Treasury Management, Public Expenditure Management, Revenue Management and Civil Service Management (HRMIS and Payroll). The system went 'live' on 1 July 2011 and is currently being used by the Ministry of Finance & Development Planning and other line Ministries, Agencies, and commission (MAC's) for transaction processing and reporting. All installed modules are being utilized with the exception of Performance Budgeting (PB) and Civil Service Management (CSM).

In July 2015, IFMIS 6.5e was migrated to IFMIS 7.0e in a bid to make the system more robust and responsive to the needs of the Government of Liberia. The second phase (April 2012 – July 2015) of the IFMIS implementation was carried out under the Integrated Public Financial Management Reform



Project (IPFMRP), funded through a Multi Donor Trust Fund. It mainly involved the roll out of IFMIS to more Ministries and Agencies (M&A's). Presently the IFMIS is rollout to fifty (50) Ministries and four (4) counties.

The Purpose of the Audit

The purpose of the audit is to evaluate IFMIS and to identify deficiencies based on the applicable laws and procedural of IFMIS in meeting the objectives of GOL; to address risks of sensitive and critical data application, and protecting the resources that support GOL missions and especially following up the audit of June 30, 2017.

Objectives and scope of the Audit

The objectives of the audit were to evaluate:

- 1. IT governance
- 2. Security management
- 3. System implementation
- 4. Physical access and logical control
- 5. Environmental controls
- 6. Change management
- 7. Operations and backups
- 8. Operating system and data management
- 9. Application controls

The scope covered the information systems arrangements in place as of July 1, 2017 to January 29, 2020 and was carried out by a team of professional IT auditors.

This audit evaluated the system for key controls in IFMIS Business processes and sensitive information within its infrastructure, security management and IT controls of the IFMIS.

Approach of the Audit

The audit was conducted in accordance with the International Standards for Supreme Audit Institutions (ISSAIs) as well as the Information Systems Audit and Control Association's (ISACA) standards, and COBIT 5. The audit was planned and performed to obtain reasonable assurance regarding the effectiveness and reliance of the system's functionalities. A risk-based audit approach was carried out to assess the Assurance of the IFMIS effectiveness and efficiency.



SITUATIONAL ANALYSIS

The Business Objective of IFMIS

The implementation of IFMIS largely revolved around IFMIS key modules and sub-modules which comprises;

Table 1: IFMIS Key Modules

| No. | Module | Status |
|-----|---------------------------------|---------------------|
| i | Financial Accountability Suite | Completed |
| ii | Performance Budgeting Module | Planned |
| iii | Civil Service Management Module | Partially Completed |

Table 2: IFMIS Sub-Modules

| Sub-modules | Implemented Functioning | and Not Implemented | Comments |
|---------------------------|-------------------------|---------------------------|-----------|
| Budget Planning | Χ | | Inactive |
| Budgeting & Appropriation | X | | Active |
| General Ledger | X | | Active |
| Expenditures | Χ | | Active |
| Treasury Management | X | | Active |
| Purchasing | Χ | | Active |
| Revenue Management | Χ | | Inactive |
| Procurement | Χ | | Inactive |
| Human Resources | Χ | | Partially |
| Payroll management | X | | Partially |

THE BUDGETING AND APPROPRIATIONS MODULE

The Budgeting and Appropriations module is one of the seven modules of the FreeBalance based Integrated Financial Management Information System (IFMIS) for the Government of Liberia (GOL). It is used to execute most of the day-to-day budgeting and appropriation business processes for Ministries, Departments and Agencies (MDAs). The Budgeting and Appropriations module is critical to the operation of government because it is use to manage MDA appropriations, allotment of funds, financial budgets as well as monitoring budget execution. The application forms provide the user's interface to business data stored in the database. A user is able to navigate between and within forms to enter and access information from the database.

The IFMIS Performance Budgeting Module is not in use. The national budget which sets the basis for expenditure in government is being performed in an off IFMIS system known as the Budget Management System (BMS). The budgeting process is carried out in BMS where the process is carried out and when finalized then uploaded Budgeting and Appropriation Module for implementation.

Information in the BMS such as the budgets, etc. is solicited from various Ministries, Agencies and Commissions (MAC) via an email call circular by the Ministry of Finance and Development Planning (MFDP). The call circular contains the budget ceilings and the budget law. The completed call circulars



are sent back to the Budget Department at MFDP. MFDP Budget Department manually uploads the various budgets into the Budget Management System (BMS) which are then analyzed and matched against the budget ceiling. If a budget exceeds the ceiling it is returned to the MAC in question; otherwise, it will not be saved and submitted for evaluation.

Other controls that ensure budgets correspond with the budget ceilings are consistency check and pivot table. Consistency check reviews the general budget at the ministry level and flags irregularities in budgets that do not match the budget ceilings. The total figure could be accurate but the detail aspect may not. Additionally, pivot table is use (particularly by the Budget Developer) to review the accuracy of inputs in the budget by analysts. If the figures are not accurate, a query is sent to the analyst in question, to make the necessary correction. The result is that a budget book or draft budget is generated and submitted to the Legislature for review and approval.

The approved copy of the national budget is migrated from the BMS into IFMIS-Budgeting and Appropriations Module for execution. In the Budget and Appropriation Module, the process of execution is guided and control by individuals with different levels of access rights in the system. These individuals may review, edit, or approve an allotment (on the system) based on the access right granted them by the system administrator. The Budget Developer, for example, reviews the uploaded copy of the budget on the system to authenticate balances and ensures that funds are available for expenditure.

During execution, MACs requests allotment from the Minister of the Finance and Development Planning. Their requests are reviewed and stamped by the minister for action. From the minister's office, allotment requests are send to the Deputy Minister for Budget (DMB) and the Assistant Minister of Budget (AMB) for further review. After review, the AMB sends the allotment requests to the director concern. In cases of emergencies, the AMB sends the allotment to the Allotment Coordinator for processing.

A director in the Budget Department assigns an analyst to process the allotment request. The request is reviewed by the analyst to ensure that the coding is correct and that the M&A's has the require funding on the particular budget line. After confirming the funds balances and coding, the analyst issues a memo advising on whether the allotment can be process or not. If accepted, the memo is approved by the concern director, the Deputy Minister for budget and the Assistant Minister for budget. The AMB stamps the allotment request and sends it to the Allotment Coordinator for processing into IFMIS.

The Coordinator reviews the document and assigns it to a staff that processes it in IFMIS and transitions it to the Coordinator for review. If there is error, the Coordinator rejects the allotment and asks the staff concern to edit the transaction. When accepted, the allotment is send to the DMB for final review and approval. From the DMB, the allotment is transitioned to the Cash Management and Financial Approval Unit.



The Cash Management and Financial Approval Unit

The CMFAU are responsible for the financial budgeting aspect of IFMIS. The essence of this process is to ensure that cash is available before vouchers are processed. The unit receives daily report of bank balances. These bank balances help the Director of cash management to determine the amount available for use.

Every allotment has system-generated codes as a unique identifier used to access approved allotment, and for Cash Management to get detail information from the system on allotments uses the codes. The hard copy of the allotment is submitted with the allotment code and amount allotted for further processing. Processed allotments go through levels of approvals: The Director of CMFAU does first level review and approved. If okay, the allotment is transitioned to the Assistant Minister of Fiscal Affairs for review and approval, and to the Deputy Minister of Fiscal Affairs for final approval. The purpose of the review is to verify the content of the allotment within the system and compare it with the hard copy. The transaction then transitions to the Accounting Services Unit (ASU).

Accounting Services Unit (ASU)

The ASU comprise three sections, which include:

- 1. Receiving Line...collects vouchers and purchase orders from expeditors of various Ministries and Agencies, record, number and scans them through Electronic Document Management System (EDMS).
- 2. Pre-Audit...... review all documents to ensure financial rules are followed, and taxes deducted.
- 3. The Budget Section ----- Analyst and supervisors work with in the pre-Audit Section. After review, supervisors of the Pre-Audit Section submit the document to the Budget Section for further review and processing. At the Budget Section, an analyst creates the Expense Vouchers (EVs) in IFMIS and transitions them to their supervisor for further review and approval, final approval is done by the head of ASU. From ASU, the voucher is send to the Treasury Service Unit (TSU).

Upon receiving hard copy of the voucher from ASU, Analysts of the TSU ensure that the EV is approved by the ASU before proceeding. Once confirmed, the EV number is use to extract voucher from the system for approval. When approved, the voucher is transition to the Electronic Data Processing (EDP) unit for check preparation.

At the EDP checks are prepare for approved vouchers; vouchers from the treasury service unit are recorded and checks are written. There are two systems used in this section for processing data, namely:

- 1. The Free Balance System: is use to pull out checks and finalize checks that are approve.
- 2. The Pay Station system: is use for printing checks.

From IFMIS salaries are pulled and send to pay station for printing. Salary or operational codes are used to pull and access voucher in the system. Vouchers are verified and hard copy of check is compared with vouchers for consistency. Unmatched checks are taken to the ASU for correction or clarity. Later, Checks are accompanied with Transfer Order. The Treasury Services Unit (TSU) confirms receipt of the checks by singing on the transfer order.



The Treasury Management Module

The Treasury Management module is one of the seven modules of the FreeBalance based Integrated Financial Management Information System (IFMIS) for the Government of Liberia (GOL). It is used to execute payment and bank account reconciliation business processes for Ministries, Departments and Agencies (MDAs). The Treasury Management module is critical to the operation of government because it is used to manage two critical processes in the budget execution and accounting cycle.

The Government of Liberia IFMIS Treasury Management module processes include the following;

- 1. Creation and Processing of Government Payments.
- 2. Cancelling/Voiding Payments,
- upload of bank account statements,
- 4. Bank Account Reconciliation, and
- 5. Generation and printing of Payment and Reconciliation Reports.

Performance Budgeting

The performance budgeting (PB) was purchased to facilitate budget preparation, execution and reporting, it is currently being used only as a reporting tool. At present the budget for the GOL is being prepared via a be-spoke application called Budget Management System (BMS).

Termination of Employee Assignment

After employees are enrolled on the payroll by the creation of assignment, they seldom retain the same status or remain on the payroll forever. Some employees are promoted while others are demoted. Sometimes, employees' areas of assignments are changed. Likewise, some employees resign their post, are dismissed or retired. All the above cases will trigger the need to terminate employee assignment.

Once the Analyst has completed the end of employee assignment transaction, it is forwarded to the approver through the approval hierarchy workflow.

When the initial task of terminating the Employee Assignment is completed, the approving user has to approve the Change Request before the termination of the employee assignment takes effect on the system.



1 DETAILED FINDINGS AND RECOMMENDATIONS

1.1 IFMIS Network Security Management

1.1.1 Inadequate placement of the firewall and Demilitarized Zone (DMZ)

Observation

- 1.1.1.1 Telecommunications Act 2007 of the Republic of Liberia on Confidentiality of Customer Communications Section 50 (1) stipulates that Service providers shall take all reasonable steps to ensure the confidentiality of customer communications.
- 1.1.1.2 Boundary protection controls include gateways, routers, firewalls, guards, network-based malicious code analysis and virtualization systems, intrusion detection systems (networked and host-based), encrypted tunnels, managed interfaces, mail gateways, and unidirectional gateways (e.g., data diodes). Boundary protection devices determine whether data transfer is permitted, often by examining the data or associated metadata.
- 1.1.1.3 Our reviewed of the network diagram result shows that the Demilitarized Zone (DMZ) and firewall are hosted on the same network with Internet protocol (IP) address (41.86.144/29). Moreover, there were no router place between the DMZ and the firewall. See exhibit 1.
- 1.1.1.4 Additionally, MFDP network has one port of entry with one firewall at the network interface. The current implementation architecture of the firewall is a single tier architecture which is useful against generic attacks but offers minimal protection to the IFMIS network.

Risk

- 1.1.1.5 Failure to place router at the edge of the network before the firewall might enable attacker to gain access to your internal network.
- 1.1.1.6 Additionally, the current firewall architecture presents a single point of failure for inbound and/or outbound traffic access that might lead to a traffic bottleneck.

Recommendation

- 1.1.1.7 Management should ensure that router is place at the edge of the network and the DMZ should be configured off the firewall. There should be firewall internally to protect sensitive information of the applications and databases knowing their criticality.
- 1.1.1.8 Additionally, due to the criticality of the system and sensitive information that need to be protected from unauthorized access, we strongly recommend that management should secure the network, by either using two firewalls (the back-to-back model). In the back-to-back setup, one of the firewalls will allow traffic destined to the DMZ only, while the other only allows traffic to the DMZ from the internal network, or a firewall with three network interfaces: one for untrusted networks (Internet), one for the DMZ, and one for the internal network.



Management's Response

1.1.1.9 Currently there is no a DMZ in place as was depicted in the network diagram shared then.

MFDP is in the process of acquiring an additional firewall device to implement an appropriate DMZ.

Auditor General's Position

1.1.1.10 We acknowledge management's acceptance of our finding and recommendation; however, management should ensure that accurate information's of the network diagram is presented. We will follow up on the implementation of the recommendation during subsequent audit.

1.1.2 End of Life Computing of Network Equipment

Observation

- 1.1.2.1 Telecommunications Act 2007 of the Republic of Liberia on Confidentiality of Customer Communications Section 50 (1) stipulates that Service providers shall take all reasonable steps to ensure the confidentiality of customer communications.
- 1.1.2.2 It was established that all the servers supporting the IFMIS application are outdated and have exceeded their end of life; outdated equipment is prone to failure and is less reliable. End –of life technology can end up costing the Government of Liberia (GOL) considerable amount of money to maintain the System or unplanned downtimes which will affect productivity.
- 1.1.2.3 To Relied on aging machines means added expenses; Patches and security updates may not be readily available and can make outdated equipment vulnerable. See table 1

Risk

1.1.2.4 If management fails to change all the End –of – life technology might cause GOL unplanned downtimes which will affect productivity.

Recommendation

- 1.1.2.5 Management should constitute a team to evaluate the cost- benefit analysis on the critical IFMIS servers and network infrastructure for replacement.
- 1.1.2.6 Management has produced a new environment at LIBTLCO National Data Center; replacement of the equipment's should be completed in the soonest possible time to avoid complete shutdown of the system.

Management's Response

1.1.2.7 The IFMIS infrastructure was upgraded. Plans are underway to further upgrade the IFMIS infrastructure to accommodate projected system demands subject to availability of funding.



Auditor General's Position

1.1.2.8 We acknowledge management's acceptance of our finding and recommendation; however, management should ensure that the IFMIS infrastructure are up-to-date to support the sustainable functionality of the system. We will follow up on the implementation of the recommendation during subsequent audit.

1.1.3 User Credential in clear text

Observation

- 1.1.3.1 Telecommunications Act 2007 of the Republic of Liberia on Confidentiality of Customer Communications Section 50 (1) stipulates that Service providers shall take all reasonable steps to ensure the confidentiality of customer communications.
- 1.1.3.2 During the Audit it was noted that the website (ifmis.mfdp.gov.lr) does not use Hypertext Transport Protocol Secure (HTTPS) for all of its resources, MFDP implement Hypertext Transport Protocol (HTTP/1.1.).
- 1.1.3.3 Additionally, we noted that users accessing the IFMIS application on the local area network using the Uniform Resource Locator URL [http://172.16.52.6:8080/], which is an unsecured channel that sends clear text, Usernames and passwords, are transmitted over an unencrypted channel (HTTP) port 80 and operates at the application layer level. **See Exhibit 2.**

Risk

- 1.1.3.4 Failure to transfer information via an encrypted channel (HTTPS) could lead to unauthorized user accounts been created, transactions posted, approved, modified or even deleted by an attacker.
- 1.1.3.5 Additionally, it would be very difficult for users with their credentials stolen to defend the actions performed with their user accounts.

Recommendation

- 1.1.3.6 We strongly recommend that MFDP Management should ensure that information is transferred through an encrypted channel (HTTPS/HTTP2) to avoid being intercepted by malicious users. SSL/TLS is a protocol developed for transmitting private channels through the Internet. SSL/TLS works by using a private key to encrypt data that is transferred over the SSL/TLS connection. It is very important to correctly use SSL/TLS for critical financial transactions as occurs in the IFMIS application.
- 1.1.3.7 Additionally, any protocol that solicits sensitive information such as passwords must be transmitted using SSL/TLS to provide privacy and data integrity. It also prevents an attacker from submitting an imitation page that does not use SSL/TLS.



Management's Response

- 1.1.3.8 The IFMIS team is working with the application developer (FreeBalance) to resolve this issue.
- 1.1.3.9 The current IFMIS website has Hypertext Transport Protocol Secure (HTTPS). This is the link: https://ifmis.mfdp.gov.lr/gov-web.

Auditor General's Position

1.1.3.10 We acknowledge management's acceptance of our finding and recommendation; however, management should ensure that that information's are transferred through an encrypted channel (HTTPS/HTTP2) to avoid being intercepted. We will follow up on the implementation of the recommendation during subsequent audit.

1.1.4 Unresolved issues on the console log

Observation

- 1.1.4.1 Telecommunications Act 2007 of the Republic of Liberia on Confidentiality of Customer Communications Section 50 (1) stipulates that Service providers shall take all reasonable steps to ensure the confidentiality of customer communications.
- 1.1.4.2 Best practice score is 77, and above which indicates that the network is performing perfectly.
- 1.1.4.3 We noted that Libtelco is the internet service provided for MFDP (ifmis.mfdp.gov.lr) with the IP (41.86.8.146). There was a test performed on the website of MFDP with the tools site24x7 and Greekflare, moreover the result shows a performance score of 36 which indicate that this website is performing poorly.
- 1.1.4.4 Additionally, IFMIS website page lacks the HTML doctype thus triggering quirks-mode. Specifying a doctype prevents the browser from switching to quirks-mode. It was tested and identify that errors are logged to the console; however, this indicates unresolved problems due to network request failures. **See exhibit 3**

Risk

1.1.4.5 The failure of MFDP management to identify gaps, inconsistencies, or conflicts might lead to system downtime.

Recommendation

- 1.1.4.6 Management should ensure that the console logs are monitor to recognize issues known as problems, gaps, inconsistencies, or conflicts, which need to be identified and recorded when they occur, moreover they should be resolved in a timely manner.
- 1.1.4.7 Management should acquire tools to access the website performance, it should always show the score 77 upward. Management should make sure that issues are indeed communicated in real time and then investigated, to be resolved quickly and effectively in a timely manner to avoid system downtime.



Management's Response

1.1.4.8 A dedicated IT staff has been assigned the responsibility to review the logs on a regular basis, work with the application developer (FreeBalance) to resolve identified issues in a timely manner and prepare weekly reports to be shared with management for information and further action. As part of the planned additional IFMIS infrastructure upgrade, MFDP will acquire tools to access the website performance. However, this is subject to availability of funding.

Auditor General's Position

1.1.4.9 We acknowledge management's acceptance of our finding and recommendation; however, we encourage management to ensure that logs are reviewed timely to identify issues so that they are resolved. We will follow up on the implementation of the recommendation during subsequent audit.

1.1.5 Lack of baseline security documentation

Observation

- 1.1.5.1 Telecommunications Act 2007 of the Republic of Liberia on Confidentiality of Customer Communications Section 50 (1) stipulates that Service providers shall take all reasonable steps to ensure the confidentiality of customer communications.
- 1.1.5.2 It was noted that IFMIS network do not have a baseline security policy in place to provide security measure of the network infrastructure. The IFMIS network plays a critical role in the success of the financial management of all GOL institutions. Network baseline is a set of metrics that describe normal operating parameters.

Risk

1.1.5.3 Failure to create baseline security document, a network administrator will not easily identify network and architectural changes that might cause denial of service (DOS) attack.

Recommendation

- 1.1.5.4 Management should adopt standards for network, server and desktop systems to develop a more relevant and secure measure of the IFMIS network. It will reduce vulnerabilities, and make sure IFMIS security objectives are fulfilled by a particular service/system; moreover, setting the baseline enables an administrator to identify changes in traffic that could indicate an application performance problem or a security breach.
- 1.1.5.5 Additionally, a baseline security policy should be documented and approved by management. Once approved, data center administrators should ensure that all devices on the network meet the baseline requirements.

Management's Response

1.1.5.6 Draft ToRS to procure services of a short-term system security consultant have been prepared and shared with PFM Reforms for Institutional Strengthening Project (PFMRISP)



Management Unit for further action. As part of the assignment, the Consultant is expected to work with the IFMIS team to conduct a comprehensive IFMIS security review, update/prepare all the necessary system security documentation and transfer knowledge to MFDP IT/IFMIS staff among others. The assignment is expected to commence in August 2020.

Auditor General's Position

1.1.5.7 We acknowledge management's acceptance of our finding and recommendation; however, we will follow up on the implementation of the recommendation during subsequent audit.

1.1.6 No evidence to confirm review of logs on network devices

Observation

- 1.1.6.1 According to DSS06.06 of CoBit 5 Secure information assets Secure information assets should be accessible by the business through approved methods, including information in electronic form (such as methods that create new assets in any form, portable media devices, user applications and storage devices), information in physical form (such as source documents or output reports) and information during transit. This benefits the business by providing end-to-end safeguarding of information.
- 1.1.6.2 During the audit we could not obtain any evidence to confirm that logs from the switches, router and firewall etc., were reviewed by the security administrator to identify security incidents when it occurs, to correct any unusual activities on the network.
- 1.1.6.3 Additionally, logs are records of specific events occurring within the IFMIS systems and networks. Logs can be used for problem investigation, performance management, recording the actions of user and for forensic investigations. Reviewing audit logs ensures that any unusual activities are identified and followed up.

Risk

1.1.6.4 The failure to conduct regular reviews of system logs exposes MFDP to the risk of inadequate segregation of duties, security breaches and unauthorized access in the data processing environment.

Recommendation

- 1.1.6.5 Management should ensure a process and frequency for conducting review of logs; results should be clearly documented and communicated to those who will be involved. User access violation reviews must be performed in collaboration with the relevant data owners.
- 1.1.6.6 Log analyzers should be implemented to automate the auditing and analysis of logs. These logs can tell you what has happened or is happening, and revealing unauthorized activity or abnormal behavior. Security information and event management (SIEM) solution should be considered for implementation to provide threat detection and security incident response through the real-time analysis of security alerts and events generated by the network and applications.



1.1.6.7 Management should also consider implementing an assess control matrix to help identify conflicting roles and responsibilities on network equipment. This will enhance the access review process and ensure that adequate segregation of duties is enforced.

Management's Response

1.1.6.8 We have made a case to Senior Management to acquire a SIEM tool for logging and review purposes.

Auditor General's Position

1.1.6.9 We acknowledge management's acceptance of our finding and recommendation; however, we will follow up on the implementation of the recommendation during subsequent audit.

1.1.7 Non configuration of Policies on the Active Directory

Observation

- 1.1.7.1 According to BAI03.05 of COBIT 5, Build solutions, install and configure solutions and integrate with business process activities. Implement control, security and auditability measures during configuration, and during integration of hardware and infrastructural software, to protect resources and ensure availability and data integrity. Update the services catalogue to reflect the new solutions.
- 1.1.7.2 During our review of MFDP Active Directory, we observed some categories of the Advanced Audit Policy Configuration were not configured by the ICT Unit of MFDP. The categories are Account logon, Directory Services (DS) Access, Logon/Logoff, and Privilege Use. The Object Access, Policy Change and System categories are configured; however, the settings of these categories are set to Success only and not Success and Failure. **See Exhibit 4.**

Risk

1.1.7.3 If audit settings are not configured, or audit settings are too lax on the computer's security incidents might not be detected.

Recommendation

1.1.7.4 Management should properly configure these settings to ensure that domains are adequately secure to provide enough evidence for network analysis after the occurrence of security incidents.

Management's Response

1.1.7.5 No response from management.

Auditor General's Position

1.1.7.6 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.



1.1.8 Improper configuration Setting of the Domain Controller

Observation

- 1.1.8.1 BAI03.05 of COBIT 5 Build solutions. Install and configure solutions and integrate with business process activities. Implement control, security and auditability measures during configuration, and during integration of hardware and infrastructural software, to protect resources and ensure availability and data integrity. Update the services catalogue to reflect the new solutions.
- 1.1.8.2 The Center for Internet Security (CIS) Microsoft Windows Server 2012 R2 Benchmark v2.3.0. Level 1. Domain Controller provides for the setting:
 - 1. 2.2.2 Access this computer from the network to include "administrators, authenticated users, and enterprise domain controllers."
 - 2. 2.2.4 (L1) Ensure 'Add workstations to domain' is set to 'Administrators'
 - 3. 2.2.6 (L1) Ensure 'Allow log on locally' is set to 'Administrators'
 - 4. 2.2.37 (L1) Ensure 'Restore files and directories' is set to 'Administrators'
 - 5. 2.2.38 (L1) Ensure 'Shut down the system' is set to 'Administrators'
- 1.1.8.3 Contrary to the above we established the followings;
 - a) the configuration setting at MFDP is set to "everyone, administrators, authenticated users, and enterprise domain controllers." This is the default configuration setting.
 - b) Access this computer from the network user right is required for users to connect to shared printers and folders. If this user right is assigned to every group, then anyone will be able to read the files in those shared folders.
 - c) "Add workstations to domain" policy setting specifies which users can add computer workstations to the domain. The Center for Internet Security (CIS) Benchmark provides for the setting to be set to "Administrator". The configuration setting at MFDP is set to authenticated users. This is the default configuration setting.
 - d) C. "Allow log on locally" is a policy setting that determines which users can interactively log on to computers in your environment. Logons that are initiated by pressing the CTRL+ALT+DEL key sequence on the client computer keyboard require this user right. Users who attempt to log on through Terminal Services / Remote Desktop Services also require this user right. The Center for Internet Security (CIS) Benchmark provides for the setting to be set to "Administrator". The configuration setting at MFDP is set to "Administrators, account operators, server operators, print operators, and backup operators." This is the default configuration setting.
 - e) D. Restore files and directories policy setting determines which users can bypass file, directory, registry, and other persistent object permissions when restoring backed up files and directories on computers that run Windows Vista (or newer) in your environment. This user right also determines which users can set valid security



principals as object owners. The Center for Internet Security (CIS) Benchmark provides for the setting to be set to "Administrator". The configuration setting at MFDP is set to "Administrators, server operators, and backup operators." This is the default configuration setting.

f) E. Shut down the system policy setting determines which users are logged on locally to the computers in your environment can shut down the operating system with the Shutdown command. The Center for Internet Security (CIS) Benchmark provides for the setting to be set to "Administrator". The configuration setting at MFDP is set to "Administrators, server operators, print operators, and backup operators." This is the default configuration setting. See Exhibit 5.

Risk

- 1.1.8.4 A. If user right is assigned to everyone group, then anyone will be able to read the files in those shared folders
- 1.1.8.5 B. Users with this right could add a computer to the domain that is configured in a way that violates organizational security policies.
- 1.1.8.6 C. If you do not restrict this user right to legitimate users who need to be able to log on to the console of the computer, unauthorized users could download and run malicious software to elevate their privileges.
- 1.1.8.7 D. An attacker with the Restore files and directories user right could restore sensitive data to a computer and overwrite data that is more recent, which could lead to loss of important data, data corruption, or a denial of service.
- 1.1.8.8 F. Misuse of shutting down the system user right can result in a denial-of-service condition.

Recommendation

1.1.8.9 Management should properly configure these settings to ensure that the domain is adequately secure, to validate and authenticate the user that has access on the network.

Management's Response

1.1.8.10 No response from management.

Auditor General's Position

1.1.8.11 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.



1.1.9 Open Ports with legitimate Services

Observation

- 1.1.9.1 DSS06.06 Secure information assets accessible by the business through approved methods, including information in electronic form (such as methods that create new assets in any form, portable media devices, user applications and storage devices), information in physical form (such as source documents or output reports) and information during transit. This benefits the business by providing end-to-end safeguarding of information.
- During the audit it was established that there were Open ports with legitimate services (like web browsers, web pages, and file transfer services) that rely on specific ports to receive and transmit information. Ports are an integral part of the Internet's communication model. All communication over the Internet is exchanged via ports to devices. See Exhibit 6.

Risk

- 1.1.9.3 Failure to filter or close legitimate open ports might lead to an exploit through security vulnerabilities or malicious services that are introduced to the system via malware or social engineering.
- 1.1.9.4 Additionally, legitimate services in conjunction with open ports that have not been close made lead to unauthorized access to sensitive data.

Recommendation

- 1.1.9.5 Management should ensure that unused or open ports are close or filtered to reduce security risk, this action will reduce the number of attack vectors that the IFMIS is exposed to.
- 1.1.9.6 Additionally, these open ports and services are exposed to the public Internet, so they can easily be scanned continuously by monitoring technology. To protect the network from vulnerabilities all ports should be closed or filtered to reduce security attacks.

Management's Response

1.1.9.7 No response from management.

Auditor General's Position

1.1.9.8 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.1.10 Improper configuration of the Domain Name System (DNS)

Observation

1.1.10.1 DSS05.03 Manage endpoint security - Ensure that endpoints (e.g., laptop, desktop, server, and other mobile and network devices or software) are secured at a level that is equal to or greater than the defined security requirements of the information processed, stored or transmitted.



1.1.10.2 It was established that the Domain Name System (DNS), SOA (Start of Authority) record for the zone is require being present in the Primary Name Server and was not found. This usually means that the zone file is not setup properly in the Primary Name Server host. The firewall configuration must permit connections on this port from any host on the internet for the DNS to function properly.

Risk

1.1.10.3 Hackers exploit poor configuration of DNS servers to inject fraudulent address information that can reroute users to a fake website under their control.

Recommendation

- 1.1.10.4 Management should ensure that the Domain Name System (DNS) is configured properly, to decentralize the naming system for computers, Network devices, services, or other resources connected to the internet. Most prominently, to translates more readily memorized domain names to the numerical IP addresses and identify network devices to improve performance.
- 1.1.10.5 Additionally, DNS is an essential part of the internet communications framework that needs to be protected at all time.

Management's Response

1.1.10.6 No response from management.

Auditor General's Position

1.1.10.7 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.1.11 Database Security Management

1.1.11.1 Inadequate resources for failover to passive node on the IFMIS application and database clusters.

Observation

- 1.1.11.2 According to DSS06.06 of CoBit 5 Secure information assets Secure information assets should be accessible by the business through approved methods, including information in electronic form (such as methods that create new assets in any form, portable media devices, user applications and storage devices), information in physical form (such as source documents or output reports) and information during transit. This benefits the business by providing end-to-end safeguarding of information.
- 1.1.11.3 It was established that the IFMIS system has not implemented a failover cluster on both the application servers and the database servers. In the instance one of the servers, or nodes, fails, another node in the cluster can take over its workload without any downtime.



1.1.11.4 Additionally, the memory and CPU resources on the passive nodes for both the application and database servers are not equivalent to the active nodes. See table 2.

Risk

1.1.11.5 Failure to comply with vendor recommended specification means performance could be affected by the application, web, and database servers.

Recommendation

1.1.11.6 Management should ensure that the current resources on the IFMIS application, web and database servers be upgraded to meet the vendor recommended required specifications or be upgraded to comply with a reasonable requirement, considering the critical role IFMIS application plays in government financial management operations.

Management's Response

1.1.11.7 No response from management.

Auditor General's Position

1.1.11.8 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.1.12 Unrestricted Super User's Privileges

Observation

- 1.1.12.1 DSS05.04 of CoBit 5 States that manage user identity and logical access to ensure that all users have information access rights in accordance with their business requirements and coordinate with business units that manage their own access rights within business processes.
- 1.1.12.2 During the audit it was noted that there were five super users across both Database and IFMIS application, including the system Administration with full permanent superusers privileges.

Risk

1.1.12.3 If management fails to restrict the super user privileges based on individual role and responsibility, this could lead to one person having access to confidential information and sensitive data that could cause data integrity.

Recommendation

1.1.12.4 Management should put in place mechanism to control and monitor superuse, they should apply best practices for managing personal accounts with superuser privileges in difference dimension such as; accounts with full permanent superuser privilege, restricted superuse privilege and temporary superuser privilege based on the role and responsibility on the system.



Management's Response

1.1.12.5 This has been resolved since the upgrade

Auditor General's Position

1.1.12.6 We acknowledge Management's assertion; however, we maintain our finding. Management should ensure that privileges in difference dimension be given on a need-to-know basis. We will follow up on the implementation of the recommendation during subsequent audit.

1.1.13 Lack of database performances monitoring tools

Observation

- 1.1.13.1 According to DSS06.06 of CoBit 5 Secure information assets Secure information assets should be accessible by the business through approved methods, including information in electronic form (such as methods that create new assets in any form, portable media devices, user applications and storage devices), information in physical form (such as source documents or output reports) and information during transit. This benefits the business by providing end-to-end safeguarding of information.
- 1.1.13.2 It was established that there were no database performances monitoring tools. As a result, the DBA's use basic SQL tools to check the status of the database, because of the Ubiquity of SQL databases. SQL injection is one of the most common types of attack on the internet.
- 1.1.13.3 Additionally, the core IFMIS application is FreeBalance Version 7.0 and database is running on MSSQL server 2012 that need to be upgraded.

Risk

1.1.13.4 The nonexistence of database performances monitoring tools might lead to extraction of sensitive information; deletion of data or corruption the database.

Recommendation

- 1.1.13.5 We strongly recommend that management acquire database performance monitoring tools to monitor IFMIS databases constantly in order to provide insight on the current state of the database and how it is compare to its past state. Management should use database performance monitoring to see how databases are using resources and to notice database problems before they significantly restrain the database performance.
- 1.1.13.6 The database performance monitoring tools help reduce database downtime and improve problem resolution in a timely manner.
- 1.1.13.7 Additionally, the current version MSSQL running on server 2012, requires to be upgraded to a more secure version that are efficient of running FreeBalance Version 7.0 more effectively.

Management's Response

1.1.13.8 We have made a case to Senior Management for the acquisition of tools for such purpose.



Auditor General's Position

1.1.13.9 We acknowledge management's acceptance of our finding and recommendation; however, we will follow up on the implementation of the recommendation during subsequent audit.

1.1.14 Password Expiration Not Enforce at the Application Level

Observation

- 1.1.14.1 MFDP ICT-Security Network Policy Access Control section states that user password change shall be set to ninety (90) days with restrictions on re-use of previous passwords.
- 1.1.14.2 It was established that at the application level of the Freebalance users are authenticated in order to access the application. During our review, we observed that at the windows authentication level this policy on password change is being enforced; but at the application level authentication (Freebalance) this policy on password change was not enforced. **See exhibit 7.**

Risk

1.1.14.3 The longer a password exists the higher the likelihood that it will be compromised by a brute force attack, by an attacker gaining general knowledge about the user, or by the user sharing the password.

Recommendation

1.1.14.4 The Management of MFDP should ensure that the application program is arranged to enforce its password change policy.

Management's Response

1.1.14.5 This issue was addressed. The system now requires a user to change the password once it has expired (every after sixty days).

Auditor General's Position

1.1.14.6 We acknowledge Management's assertion; however, we maintain our finding. MFDP ICT-Security Network Policy Access Control section states that user password change shall be set to ninety (90) days not sixty (60) days.

1.1.15 System Administrator (SA) Account not Rename

Observation

- 1.1.15.1 The Center for Internet Security (CIS) benchmark on Microsoft SQL Server 2012 provides for the renaming of System Administrator (SA) account. It also provides for the SA account to be disabled.
- 1.1.15.2 During our review, we observed that there still exists account with the name SA on the database; moreover, the SA account of the database was not renamed. The SA account is a widely known and often widely used SQL Server login with system admin privileges.



Risk

1.1.15.3 It is more difficult to launch password-guessing and brute-force attacks against the "sa" login if the name is not known. Also enforcing this control reduces the probability of an attacker executing brute force attacks against a well-known principal.

Recommendation

1.1.15.4 The Management of MFDP/IFMIS should ensure that the SA account is renamed to protect the database from attacker and safeguard information.

Management's Response

1.1.15.5 This issue being reviewed by management and a procedure for managing the System Administrator (SA) account is being drafted in consultation with the application developer (FreeBalance).

Auditor General's Position

1.1.15.6 We acknowledge management's acceptance of our finding and recommendation; however, we will follow up on the implementation of the recommendation during subsequent audit.

1.1.16 Using Default Port

Observation

- 1.1.16.1 The Center for Internet Security (CIS) benchmark on Microsoft SQL Server 2012 provides that the default SQL Server instance will be assigned a default port of TCP: 1433 for TCP/IP communication. Administrators can also configure named instances to use TCP: 1433 for communication. TCP: 1433 is a widely known SQL Server port and this port assignment should be changed.
- 1.1.16.2 During our review of the database, we observed that the database is still using the default port 1433.

Risk

1.1.16.3 Using the default port makes the database vulnerable to attacks.

Recommendation

1.1.16.4 Management should consider changing the default port No. 1433.

Management's Response

1.1.16.5 The IFMIS team is currently working with application developer (FreeBalance) to address this issue.

Auditor General's Position

1.1.16.6 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.



1.2 Ensuring Security of Business Processes Management

1.2.1 Inadequate security awareness program

Observation

- 1.2.1.1 According to the TCT security/ Network policy The ICT Unit shall in its annual work plan provide ICT clinic/ training services to all MFDP personnel. Training sessions should cover topics on information security awareness and use of ICT equipment/ materials, and ICT office applications.
- 1.2.1.2 There was no evidence of IT security awareness training for all IFMIS users across the various Ministries and Agencies (M&A's). Moreover, there was no ongoing program to ensure all IFMIS users remain aware of their security responsibilities.

Risk

1.2.1.3 The lack of security awareness training or program for users may lead to vulnerabilities been exploited on the systems and network through security violations.

Recommendation

1.2.1.4 Management should ensure that there is an ongoing security awareness program that should be implemented for all IFMIS users, moreover security briefings and training should be monitor and documented. Security awareness should be maintained by informing users of the importance of the information they handle and the legal and business reasons for maintaining its integrity and confidentiality.

Management's Response

1.2.1.5 The ICT team is developing an ICT security awareness programme for MFDP and the MACs using the IFMIS to be presented to management for review and approval. Once the programme is approved, implementation will commence.

Auditor General's Position

1.2.1.6 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.2.2 Inadequate user access revocation procedures

Observation

- 1.2.2.1 According to MFDP's ICT Security/Network Policy adopted for the IFMIS project, MFDP administration/ personnel section shall promptly communicate to ICT Unit information of personnel that have been re-assigned, transferred, retired, etc., and it is expected the ICT Unit to immediately effect necessary action.
- 1.2.2.2 DSS05.05 of CoBit 5 manage physical access to IT assets, should define and implement procedures to grant, limit and revoke access to premises, buildings and areas according to



business needs, including emergencies. Access to premises, buildings and areas should be justified, authorized, logged and monitored. This should apply to all persons entering the premises, including staff, temporary staff, clients, vendors, visitors or any other third party.

1.2.2.3 Contrary to the above, it was noted that there were no formal or timely process for notifying the system administrator of employees leaving employment or changing positions. Moreover, there is no formal process for managing user access removal on other IFMIS infrastructures (databases and operating systems).

Risk

1.2.2.4 The lack of prompt process and communication to stop unauthorized access could lead attacker having access to sensitive information.

Recommendation

1.2.2.5 Management should ensure that staffs that are terminated, transfers, and promoted to another position should be promptly communicated to the IFMIS system administrator for quick implementations. Inactive accounts and accounts for terminated or resigned IFMIS users and contractors should be disabled, removed, or adjusted in a timely manner.

Management's Response

- 1.2.2.6 There is currently a process in place for notifying the system administrator, but it needs to be documented. When an employee leaves the employ of an entity or is promoted, the head of the entity writes the Comptroller General(CAG) to notify him of the change. The CAG then instructs the System Admin to make adjustments on the system for the change.
- 1.2.2.7 Currently, the MFDP relies on the Ministries (MACs) to provide information on staff turnover (transfers, dismissals, promotion, quitting, etc); However, some of the MACs to do not provide the information on time. Therefore, the Comptroller General office is reaching a decision to mitigate this risk. For example, users who do not have activities on the system for a specified period of time, say 3 months or more, will be deactivated. This will prompt the head of entities to follow up with the Comptroller General's Office.

Auditor General's Position

1.2.2.1 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.2.3 Inadequate controls over standing data maintenance

Observation

1.2.3.1 Approve copy of the national budget is migrated into IFMIS for execution. The process of execution is guided and control by individuals with different levels of access right to the system. These individuals may review, edit, or approve an allotment (on the system) based on the access right granted them by the system administrator. The Budget Developer, for example, reviews the uploaded copy of the budget on the system to authenticate balances and ensured that funds are available for expenditure.



- 1.2.3.2 Contrary to the above it was noted that system enforced authorizations are not required for upload and/or modifications to the following standing data:
 - 1. Budget uploads into IFMIS- once the budget data is uploaded by the FMO, the budget lines on IFMIS are updated without being transitioned to a superior management staff for review and approval in the system;
 - 2. Vender/supplier master data vender addition/modifications by the IFMIS system administrator does not require system approval by a second person.

Risk

1.2.3.3 This poses a risk that unauthorized changes could have huge financial impact.

Recommendation

1.2.3.4 Management should ensure that reviews and approvals are required on IFMIS before uploads and /or modifications are made to key standing data.

Management's Response

- 1.2.3.5 Budget data uploaded into the IFMIS by the Financial Management Officers (IFMIS support team) is checked for accuracy by the Budget developer who reports directly to the Deputy Minister for Budget. The Budget Developer uses a pivotal table connected to the database; the developer also uses excel functionalities such as v-lookup to check uploaded data to confirm that the uploaded budget is accurate.
- 1.2.3.6 Where discrepancies are identified, the IFMIS unit is notified by the Budget Developer to make the appropriate adjustments.
- 1.2.3.7 NOTE: The IFMIS vendor, FreeBalance Inc. has activated and configured the Budget Planning Module which will allow for the planning and execution of the Budget on the same platform (IFMIS PLATFORM). Planned Budget data will be pushed seamlessly from the Budget Planning module to the Financials for budget execution; this will significantly mitigate risks of any data manipulation on transfer of data. As part of the implementation activities, comprehensive user acceptance testing was conducted and core team of MFDP staff (Training of trainers) was trained on how to use the IFMIS Budget Planning module. To ensure adequate readiness, a parallel run of the IFMIS Budget Planning module is scheduled to commence in May 2021. The IFMIS Budget Planning Module will be used to prepare the six-month national budget (July 2021 to December 2021) and the national budget for the financial year 2022 (January 22 to December 2022), along with the existing legacy system. The Budget Planning Module is expected to go-live in 2023.

Auditor General's Position

1.2.3.8 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.



1.2.4 Budget preparation not performed on IFMIS

Observation

- 1.2.4.1 The performance budgeting (PB) was purchased to facilitate budget preparation, execution and reporting, it is currently being used only as a reporting tool. At present budget for the GoL is being prepared via a be-spoke application called BMS.
- 1.2.4.2 According to the Budgeting and Appropriations User Manual, the Budget Control functionality within the Budget and Appropriations module is often used to create budget for the first time at the beginning of the Fiscal Year. A user can create all budget levels (Appropriation, Allotment and Financial budget) using the Budget Control functionality.
- 1.2.4.3 Contrary to the above our review of the budgeting processes, we noted that the GoL budget is prepared in a separate application called Budget Management System (BMS). The application does not interface with IFMIS. Thus, after budget preparation, the budget data is extracted from BMA by the budget developer and manually uploaded into IFMIS by a financial Management Officer (FMO).

Risk

1.2.4.4 The absence of budget preparation been done on the IFMIS, budget data may be prone to errors or data manipulations during the budget upload phase.

Recommendation

1.2.4.5 Management should stop manual intervention in populating the budget information into IFMIS; however, management should engage the vendor to enable the budget preparation module in order to ensure that budget preparation and execution are done on the IFMIS and to avoid potential errors or manipulations.

Management's Response

1.2.4.6 The IFMIS vendor, FreeBalance Inc. has activated and configured the Budget Planning Module which will allow for the planning and execution of the Budget on the same platform (IFMIS PLATFORM). Planned Budget data will be pushed seamlessly from the Budget Planning module to the Financials for execution; this will significantly mitigate risks of any data manipulation on transfer of data. As indicated above, comprehensive user acceptance testing of the module was conducted and core team of MFDP staff trained. To ensure adequate readiness, a parallel run of the IFMIS Budget Planning module is scheduled to commence in May 2021. The IFMIS Budget Planning Module will be used to prepare the sixmonth national budget (July 2021 to December 2021) and the national budget for the financial year 2022 (January 22 to December 2022). along with the existing legacy system. The Budget Planning Module is expected to go-live in 2023.

Auditor General's Position

1.2.4.7 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.



1.2.5 No approval process for additions to the vendor listing

Observation

- 1.2.5.1 According to the documented business process of the purchasing module The purchasing module is used to perform most of the day to day procurement functions of Government. The purchasing module is critical to the operation of government because a significant percentage of government expenditure is incurred through procurement of goods and services. Specifically, the module is used to initiate procurements through the entry of purchase requisitions, purchase orders and receipt of goods and services provided to government Ministries and Agencies (M&As).
- 1.2.5.2 From our review of expenditure business process, we noted that in order to set up new payees in the system as vendors, the tax clearance certificates and business registration documents are provided by the procurement unit of the relevant Ministry or Agency to the System Administrators based on which the updates are done.
- 1.2.5.3 However, it was noted that there is no approved documentation from the heads of the Institution or the procurement directors that authorized the addition of the vendor under the Ministry or Agency.

Risk

1.2.5.4 Unauthorized or inaccurate vendor records added to vendor listings may not be detected in a timely manner.

Recommendation

1.2.5.5 We recommend that updates to vendor listing on IFMIS should be authorized by senior management personnel from the relevant Ministry or Agency that is requesting the update.

Management's Response

1.2.5.6 No response from management.

Auditor General's Position

1.2.5.7 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.2.6 CSM module not used for payroll processing for all Ministries and Agencies

Observation

1.2.6.1 The Civil Service Management (CSM) module is one of the seven (7) modules of the FreeBalance based Integrated Financial Management Information System (IFMIS) for the Government of Liberia (GoL). It is a fully integrated web-based human resource information management system designed to manage Government Payrolls and Pensions and the related aspects. The Civil Service Management (CSM) module is critical to the operation of Government because it is used to manage payrolls and pension expenditure for Ministries,



Agencies, Authorities and Commission (MAAC) which account for significant portion of public expenditure.

- 1.2.6.2 Terminating of Employee Assignment, after employees are enrolled on the payroll by the creation of assignment, they seldom retain the same status or remain on the payroll forever. Some employees are promoted while others are demoted. Sometimes, employees' areas of assignments are changed. Likewise, some employees resign their post, are dismissed or retired. All the above cases will trigger the need to terminate employee assignment. Once the Analyst has completed the end of employee assignment transaction, it is forwarded to the approver through the approval hierarchy workflow.
- 1.2.6.3 When the initial task of terminating the Employee Assignment is completed, The Approving User has to approve the Change Request before the termination of the Employee Assignment takes effect on the system.
- 1.2.6.4 It was noted that payrolls are processed in the CSM module of IFMIS for only Civil Service Institutions. The payrolls of autonomous institutions, restructured organizations and state-owned entities are processed outside IFMIS.
- 1.2.6.5 The Civil Service Agency (CSA) is however responsible for placing retirees from all government institutions unto the pension payroll based on requests sent by government institutions when staff are due for retirement.
- 1.2.6.6 In instances where retirees on the pension payroll gain employment in an autonomous, restructured state-owned institution, the CSA remains unaware to remove the person from pension payroll as those institutions do not maintain their regular payroll on IFMIS. Such persons would therefore remain on both government pension payroll and the regular payroll of their new institutions until their retirement is due and those institutions make a request to CSA to add those persons to the pension payroll. It is only at that point the CSA is able to detect that they already exist on the pension payroll.

Risk

1.2.6.7 The non-processing of payroll on IFMIS for all government institutions creates possibility for retirees to receive payment from the government's payroll as well as regular payroll of autonomous agencies.

Recommendation

- 1.2.6.8 Management should strengthen the recruit process in autonomous, restructured and stateowned institutions by requiring the institutions to seek clearance from the CSA anytime they are engaging staff who have worked in a previous government institution or are above the retirement age to ensure that the staff is not on the payroll.
- 1.2.6.9 Management should also require payroll processing for all government sector institutions to be performed on IFMIS, so that unique employee IDs will prevent duplication of staff records in both pension payroll and general payroll.



Management's Response

1.2.6.10 As part of the payroll rationalization and clean-up process, HR and Payroll processes have been streamlined and configured in the IFMIS CSM module. The reconfigured CSM module is tentatively scheduled to go live in August 2021 and subsequently it will be rolled out to all government Ministries, Agencies and Commissions. A special task force comprising membership from MFDP, CSA and Internal Audit Agency was set up to undertake this assignment. A comprehensive project plan was prepared and implementation is progressing as per the plan.

Auditor General's Position

1.2.6.11 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.2.7 Lack of Approved IFMIS Manual

Observation

- 1.2.7.1 According to the documented business process of IFMIS The implementation of IFMIS has largely revolved around the implementation of the FreeBalance Financial Accountability Suite (FAS) which comprises Expenditure Management, Purchasing, Revenue Management, General Ledger, Treasury Management, Budgeting and Appropriation. However, a number of additional modules are yet to be implemented and completed, such as the Performance Budgeting (PB) Module and the Human Resource Management (HRM) module.
- 1.2.7.2 We noted that processes were not being followed in a uniform manner for the same business processes in some of the Ministries and Agencies consistent with the fact that there is no approve documented process manual.
- 1.2.7.3 End users do not have an adequate reference point for executing tasks on IFMIS due to the lack of approved documented IFMIS business processes. Users mainly rely on knowledge from training carried out during the IFMIS rollout or assistance from peers or Financial Management Officers (FMOs) to perform tasks on IFMIS.

Risk

- 1.2.7.4 The Lack of approved documented business processes may adversely affect IFMIS business processes.
- 1.2.7.5 Additionally, Staffs who are engaged in roles that require the use of IFMIS may have inadequate reference point to perform tasks.

Recommendation

1.2.7.6 Management should prepare a comprehensive approved IFMIS procedural manual depicting the workflows within each business process and ensure that they are made available to all end users at the various Ministries and Agencies.



1.2.7.7 Additionally, IFMIS business processes should be consistent and thoroughly followed by end users at the various ministries and agencies; this will lead to potential growth in the financial management process.

Management's Response

1.2.7.8 A set of IFMIS manuals have been developed for all modules on the IFMIS Financial Accountability Suite except for the Budget module which was recently activated. These manuals are being reviewed by the Comptroller General for approval. Terms of Reference for preparing the IFMIS Budget Planning module were drafted and the procurement process to source a consultant to develop the manual is ongoing. A short-term measure, quick reference guides for the IFMIS Budget Planning module have been prepared to guide user training.

Auditor General's Position

1.2.7.9 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.2.8 Roll-out Ministries and Agencies are not utilizing IFMIS

Observation

- 1.2.8.1 According to the assessment report of IFMIS In July 2015, IFMIS 6.5e was migrated to IFMIS 7.0 in a bid to make the system more robust and responsive to the needs of the Government of Liberia. The second phase (April 2012 July 2015) of the IFMIS implementation was carried out under the Integrated Public Financial Management Reform Project (IPFMRP), funded through a Multi Donor Trust Fund. It mainly involved the roll out of IFMIS to more Ministries and Agencies (M&A's). Presently the IFMIS is rollout to fifty (50) Ministries and four (4) countries.
- 1.2.8.2 During the audit we visited 10 line ministries and agencies to verify the effectiveness of IFMIS usages, we established the following;
 - a) the Environment Protection Agency Procurement (EPA) has been train to carryout transaction on the IFMIS. Though IFMIS have been rollout to EPA, for the past two years all IFMIS related transactions are processed at the Ministry of Finance Development Planning (MFDP).
 - b) Ministry of Education (MOE) is using IFMIS; the Procurement department is unable to carry out procurement transaction on the IFMIS system. Salary is process from MFDP, and foreign scholarship fees are process through the IFMIS system.
 - c) The Civil Services Agency (CSA) is not using the IFMIS to procure items for the past two years. Daily work on IFMIS system depends on the internet connections at CSA.
 - d) Ministries of Agriculture (MOA) need training for their staffs; they are not train adequately for processes on the IFMIS. They are having problem with internet



connections, moreover the ministry is using both the web Based and the Client Server to access the application for daily transactions. The Purchase order (PO) is process at MFDP; Most of the time there is no electricity.

Risk

1.2.8.3 If MFDP management fails to train staffs of all line Ministries and Agencies that utilizing the IFMIS, GOL might not achieve the IFMIS objective.

Recommendation

- 1.2.8.4 MFDP Management should ensure that all line Ministries and Agencies that IFMIS have been roll-out to be adequately trained to start and complete transaction on the system. Management should take into consideration the security implication of users access right on the system.
- 1.2.8.5 Additionally, Management should ensure that the system is adequate for all users, and also internal auditors should be train and given viewing right on the system.

Management's Response

- 1.2.8.6 The Processing of Salaries centrally at MFDP is a matter of Government policy and has nothing to do with the capability of the IFMIS platform at the MACs.
- 1.2.8.7 The Civil Service Agency, Ministry of Health, Environmental Protection Agency, etc. that the GAC visited have staff who were adequately trained by the IFMIS functional team during rollout of the IFMIS to those entities. In addition, the IFMIS application can easily be accessed by all users from connected MACs via the internet. Therefore, usage is based on willingness and or the availability of Allotment/Financial Budget for execution.
- 1.2.8.8 Note: The Comptroller and Accountant General is considering recommendation from IFMIS Unit to stop the Accounting Services unit from processing transactions for entities to which the IFMIS has been rolled out.
- 1.2.8.9 Refresher change management and IFMIS functional training workshops for all users in MACs connected to IFMIS are being planned under the PFMRISP project and are tentatively scheduled to commence in July 2021.
- 1.2.8.10 Rehearsal Training is being planned for entities where there is high staff turnover.

Auditor General's Position

1.2.8.11 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.2.9 Password Sharing

Observation

1.2.9.1 Page 29, section 17, paragraph 10, of the MFDP ICT-Security Network Policy provides that, Passwords shall not be shared with anyone. All passwords are to be treated as sensitive, confidential MFDP information.



1.2.9.2 Contrary to the above guidelines, the audit team observed that the Procurement Director and the Deputy Minister for Budget share their user account password with staffs in their office to execute roles assigned to them by the IFMIS IT administrator. The Procurement Director's account is being managed by the Senior Filing Clerk in the Procurement Unit while the Deputy Minister of Budget's account is being managed by the Senior Compliance Officer.

Risk

1.2.9.3 Password sharing May compromises user account, breach confidentiality and give unauthorized users access to information which they have no right to.

Recommendation

1.2.9.4 Management should create awareness or educating users about the risk of not keeping their password private.

Management's Response

1.2.9.5 Users are sensitized during rollout trainings and during IFMIS post rollout support against the risk of sharing passwords. The proposed ICT Security awareness program is expected to further mitigate this risk.

Auditor General's Position

1.2.9.6 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.2.10 Failure to Deactivate Users Accounts

Observation

- 1.2.10.1 Section 8 under Access Control of the MFDP ICT Security/ Network policy states MFDP's administration/ personnel section shall promptly communicate to ICT Unit information of personnel that have been re-assigned, transferred, retired, etc., and it is expected the ICT Unit to immediately effect necessary action. Since IFMIS owned by the Comptroller and Accountant General this provision extends to all MACs using Freebalance.
- 1.2.10.2 During the audit, we observed 35 users of various MACs have either left the entity or being reassigned but are still active users of IFMIS. In some entities someone having a particular role has left the entity while a new user has been created with the same role without deactivated the old user account. **See Table 3:**

Risk

1.2.10.3 This could lead to unauthorized access to the system.

Recommendation

1.2.10.4 Management should review the users on the system and deactivate users who are no longer functioning in said capacity.



Management's Response

- 1.2.10.5 A proposal for managing user account is being prepared for submission to CAG for approval and implementation. As part of the proposal, a report showing user activity on the IFMIS will be generated from the system. A report of users who have not logged on the system for six months will be prepared and a recommendation to deactivate them forwarded to CAG for review and approval. Once the report is approved by CAG, the users who have not logged on the system will be deactivated.
- 1.2.10.6 The IFMIS team is working with the Department of Administration to update staff exit/reassignment procedures to include a section on updating the relevant systems once a staff leaves the Ministry or is reassigned new responsibilities.

Auditor General's Position

1.2.10.7 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.3 PROGRAM CHANGE MANAGEMENT

1.3.1 Lack of change management policy

Observation

- 1.3.1.1 DSS06.06 of CoBit 5 Secure information assets should be accessible by the business through approved methods, including information in electronic form (such as methods that create new assets in any form, portable media devices, user applications and storage devices), information in physical form (such as source documents or output reports) and information during transit. This benefits the business by providing end-to-end safeguarding of information.
- 1.3.1.2 During the audit it was noted that there were no established policies and procedures for managing modifications to the IFMIS application and infrastructures. Moreover, Modifications are adjusted, tested, and moved by the same person that has access to both test and live environments.
- 1.3.1.3 Additionally, there were no documentation of program change requests and user acceptance testing to substantiate that changes made were appropriately authorized, tested, and approved for implementation. There was no mechanism to detect and log program changes being moved to production, furthermore the historical logs of program change on IFMIS application could not be provided.

Risk

1.3.1.4 Failure to develop and operationalize a change management policy could lead to Unauthorized and untested changes made to the production environment that could cause disruptions to the business and major instability to the information systems.



Recommendation

- 1.3.1.5 Comprehensive change management policy and procedures should be developed and approved by senior management. Changes to system environments, application functionality, and business processes should be proactively managed to reasonably assure financial data and process integrity. Access to program modifications and changes to configurable objects in the production environment should be restricted and monitored.
- 1.3.1.6 Additionally, changes to information systems should be properly tracked; tested by appropriate personnel; and adequately reviewed for approvals prior to being moved to production. Proper documentation of all these activities should be maintained.

Management's Response

1.3.1.7 Management is in the process of hiring a change management specialist to take care of this.

Auditor General's Position

1.3.1.8 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.4 Information Technology Governance

1.4.1 Lack of IT Steering Committee

Observation

- 1.4.1.1 APO01.01.8 of COBIT 5 require an organization to establish an IT steering committee (or equivalent) composed of executive, business and IT management to determine prioritization of IT-enabled investment programmes in line with the enterprises business strategy and priorities track status of projects and resolve resource conflicts and monitor service levels and service improvements.
- 1.4.1.2 During the audit it was noted that the MFDP had not established an IT steering committee to deal with IT matters.

Risk

1.4.1.3 Failure to Constitute an IT Steering committee could lead to inadequate information been process and not monitor for service improvement.

Recommendations

1.4.1.4 We strongly recommend that MFDP establish an IT steering committee that will include department head to discuss and document IT alignment with the business strategy to achieve its objectives. They should address issues relating to IT projects, and resolve resource conflict and monitor service levels and service improvements.

Management's Response

1.4.1.5 There is an IT steering committee. Senior Management is endeavoring to do more relative to the functions of the committee.



Auditor General's Position

1.4.1.6 We acknowledge Management's assertion. However, we maintain our finding and recommendation. Management should ensure that there is an IT Steering committee and committee meeting minutes that will show status of IT projects and monitor service levels improvements. we will follow up on the implementation of the recommendation during subsequent audit.

1.4.2 IT Strategic Committee/Meeting Minutes

Observation

- 1.4.2.1 APO01.01 of COBIT 5, Define the organizational structure. Establish an internal and extended organizational structure that reflects business needs and IT priorities. Put in place the required management structures (e.g., committees) that enable management decision making to take place in the most effective and efficient manner.
- 1.4.2.2 APO01.7 of COBIT 5, Establish an IT strategy committee (or equivalent) at the board level. This committee should ensure that governance of IT, as part of enterprise governance, is adequately addressed; advise on strategic direction; and review major investments on behalf of the full board.
- 1.4.2.3 During the audit, we noted that there was no evidence of an IT strategy Committee meeting minutes to signify that the Ministry of Finance & Development Planning (MFDP) had established an IT strategy committee to address the operations of the IT control environment and provide strategic directions.

Risk

1.4.2.4 The non-establishment of an IT strategic committee at the top Management level could result in IT governance, as part of enterprise governance, not being adequately addressed.

Recommendation

1.4.2.5 The Management of MFDP should establish an IT Strategic Committee to carry out its core functions in order to adequately address IT governance issues, which include formulating strategic direction and reviewing major investment as it relates to enterprise governance.

Management's Response

1.4.2.6 No response from management.

Auditor General's Position

1.4.2.7 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.



1.4.3 Plan, Educate and Train ICT Staffs

Observation

- 1.4.3.1 APO07.03 of CoBit 5, maintain the skills and competencies of personnel. Define and manage the skills and competencies required of personnel. Regularly verify that personnel have the competencies to fulfill their roles on the basis of their education training and or experience and verify that these competencies are being maintained, using qualification and certification programmes where appropriate. Provide employees with ongoing learning and opportunities to maintain their knowledge, skills and competencies at a level required to achieve enterprise goals.
- 1.4.3.2 Additionally, AP007.01 of COBIT 5 Maintaining adequate and appropriate staffing. "Evaluate staffing requirements on a regular basis or upon major changes to the enterprise or operational or IT environments to ensure that the enterprise has sufficient human resources to support enterprise goals and objectives. Staffing includes both internal and external resources."
- 1.4.3.3 During the review it was noted that there was no training plan in place for IT staffs that carryout the daily IT operation of IFMIS. Moreover, upon major changes to the system or the IT environment, staffs are not provided with ongoing learning and opportunities to enhance the knowledge and skills of the daily operation.

Risk

1.4.3.4 The lack of training plan of the MFDP ICT unit might lead to inappropriate functions been applied on the system.

Recommendation

1.4.3.5 We strongly recommend that the MFDP Management provide the ICT unit with ongoing learning and opportunities to enhance their knowledge, skills and competencies at a level required to achieve enterprise goals and objectives.

Management's Response

1.4.3.6 Due to funding constraints, training for ICT staff has not progressed as planned. However, as part of the Multi-donor PFM Reforms for Institutional Strengthening Project (PFMRISP), funds have been allocated to support ICT capacity building. A draft ICT capacity building strategy has been prepared and submitted to the World Bank for review and approval. Once approved, the strategy is expected to guide ICT training activities.

Auditor General's Position

1.4.3.7 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.



1.4.4 Lack of information system auditors and Risk Assessment tools

Observation

- 1.4.4.1 AP007.01 of CoBIT 5 Maintaining adequate and appropriate staffing states that evaluate staffing requirements on a regular basis or upon major changes to the enterprise or operational or IT environments to ensure that the enterprise has sufficient human resources to support enterprise goals and objectives. Staffing includes both internal and external resources.
- 1.4.4.2 It was noted that the internal audit unit does not have train IT auditors to perform IT risk assessment, to identify and analyze information system risks.
- 1.4.4.3 Furthermore, there are no tools available to assess IS/IT equipment in identifying vulnerabilities that will exploit the IFMIS systems and IT environment.

Risk

- 1.4.4.4 If management fails to employ IT audits that are knowledgeable of the system, IT risks may not be adequately assessed and controlled.
- 1.4.4.5 Additionally, the lack of tools to assess and identify risk could make the system vulnerable to unauthorized users and attacker that could exploit existing vulnerabilities.

Recommendation

- 1.4.4.6 Management should employ IT auditors that are knowledgeable and have the competencies to ensure that IT/IS risk assessment are apply appropriately to identify inherent risk. The auditors should particularly be train and skillful in identifying the nature and risk of IT technologies and systems. Moreover, they should identify and invest in tools of comprehensive Risk Assessment and Management processes.
- 1.4.4.7 Additionally, Management should ensure a periodic comprehensive internal review of IT operations and activities on IFMIS application and supporting infrastructures, issues identified should be resolved on a timely basis.

Management's Response

1.4.4.8 Systems audit capacity within MFDP is still low. As part of the plan to address this risk, an IT Auditor from the Internal Audit Agency is assigned to the Ministry.

Auditor General's Position

1.4.4.9 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.



1.4.5 Inadequate Segregation of IT duties and functions

Observation

- 1.4.5.1 DSS06.03 of Cobit 5 states that, Manage roles, responsibilities, access privileges and levels of authority. Manage the business roles, responsibilities, levels of authority and segregation of duties needed to support the business process objectives. Authorize access to any information assets related to business information processes, including those under the custody of the business, IT and third parties. This ensures that the business knows where the data are and who is handling data on its behalf.
- 1.4.5.2 During the conduct of the audit, it was observed that management has not adequately embedded segregation of duties in the structure of the IFMIS support team to ensure that the units are well structured and have different functions. Even though the support team has been separated into technical and functional teams, duties within the teams have not been adequately structured. For instance, the database administrators have oversight over both IFMIS application and database. They have also been granted administrative rights on both platforms and other infrastructures such as the domain controller, tests and production environments without any evidence of oversight.

Risk

1.4.5.3 Having administrative access on an application and its database creates an avenue to perform unauthorized activities on the application and remove traces of the activities from the database.

Recommendation

1.4.5.4 Management should ensure that duties and responsibilities within the IFMIS support teams should be appropriately segregated, one user should not have administrative rights on all platforms and all IT processes and procedures require oversight and authorization.

Management's Response

- 1.4.5.5 As part of the IFMIS implementation, a responsibility matrix which ensures segregation of duties was developed and this what guides the setup of users from MACs on the system.
- 1.4.5.6 A procedure to review user access rights on the IFMIS against the responsibility matrix, on regular basis, will be put in place by August 2021.
- 1.4.5.7 However, it should also be noted that in some cases, segregation of duties on the system is comprised due to shortage of staff especially in the Counties. When this occurs compensating controls are put in place.

Auditor General's Position

1.4.5.8 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.



1.4.6 Service Level Agreement (SLA)

Observation

- 1.4.6.1 APO09.05 of CBiT 05 states that: Regularly review service agreements according to the agreed-on terms to ensure that they are effective and up to date and changes in requirements, IT-enabled services, service packages or service level options are taken into account, when appropriate.
- 1.4.6.2 During the audit it noted that there were no contractual agreements or a service level agreement (SLA) between MFDP and LIBTELCO to host the data center. The main data center and the National data center that host the new environment of IFMIS are located on the premises of LIBTELCO.
- 1.4.6.3 From inquiry, we noted that there has been instance in the past where LIBTELCO has locked and dismissed the data center staff from the building until some payments are made.

Risk

1.4.6.4 The non-establishment of service level agreements could result in poor understanding of IT cost and benefits realization.

Recommendation

1.4.6.5 The management of MFDP should ensure that the Service Level Agreement is renewed with LIBTELCO thereby providing up-to-date and continuous maintenance of the Datacenters. A formal contract should be drafted and signed by both parties to ensure the smooth operations of the data center.

Management's Response

1.4.6.6 No response from management.

Auditor General's Position

1.4.6.7 In the absence of a response, we maintain our finding and look forward to implementation our recommending in subsequent audit.

1.4.7 ICT Unit not fully structured

Observation

1.4.7.1 Section 5.11 of the Information and Communication Technology ICT Policy of MFDP states that the ICT Unit shall be staffed with the following personnel, in the event where by these staffing needs are not internally available, by directive from the ICT governance board, the Administration Department within MFDP will be required to recruit the requisite ICT personnel from external sources; they include Director, ICT (Unit Head), Assistant Director, ICT, Manager, Information Security, Manager, Network & Systems Infrastructure, Manager, Database & Applications, Manager, ICT Support Services, Manager, Training and Capacity Building, and Manager, Programming/ Software Development.



- 1.4.7.2 APO01.01 of COBIT 5 Define the organizational structure. Establish an internal and extended organizational structure that reflects business needs and IT priorities. Put in place the required management structures (e.g., committees) that enable management decision making to take place in the most effective and efficient manner.
- 1.4.7.3 During the review of the personnel term of reference (TOR) of the ICT Unit, it was observed that only the positions of Director and Assistant Director are occupied. The rest of the positions mentions above are yet to be occupied.

Risks

1.4.7.4 Management failure to adhere to the ICT policy of the entity by not recruiting the requisite ICT personnel could result in to IT function that is non-responsive to the entity's needs.

Recommendation

1.4.7.5 Management should adhere to the Information and Communication Technology policy and set a Specific criteria regarding recruitment and meeting the needs of the staffs within the ICT unit.

Management's Response

1.4.7.6 No response from management.

Auditor General's Position

1.4.7.7 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.4.8 Lack of Redundant power supply at the Mini data center

Observation

- 1.4.8.1 DSS01.05 of COBIT 5 Manage facilities. Manage facilities, including power and communications equipment, in line with laws and regulations, technical and business requirements, vendor specifications, and health and safety guidelines.
- 1.4.8.2 Additionally, DSS01.05.1 of COBIT 5 Examine the IT facilities' requirement for protection against power fluctuations and outages, in conjunction with other business continuity planning requirements. Procure suitable uninterruptible supply equipment (e.g., batteries, generators) to support business continuity planning. 2. Regularly test the uninterruptible power supply's mechanisms, and ensure that power can be switched to the supply without any significant effect on business operations.
- 1.4.8.3 Power backup arrangements are generally adequate across all M&As as most of them depend on generators as the primary source of power during normal working hours. The drawback to this however, is the huge recurrent costs associated with this form of power supply.



- The mini data center at MFDP runs entirely on Liberia Electricity Corporation (LEC). There is 1.4.8.4 no redundant or alternative power supply from other sources.
- Additionally, MFDP/IFMIS do not have suitable interruptible supply equipment moreover 1.4.8.5 there were no power backup such, (e.g., batteries, generators) to support business continuity.

Risk

- Relying on a single source of power supply to facilitate critical systems such as IFMIS 1.4.8.6 presents a single point of failure.
- Failure for management to protect the business against power fluctuations and outages, this 1.4.8.7 could lead to data been corrupted or lost.

Recommendation

Management should ensure that there is redundancy power supply at the Mimi data center. 1.4.8.8

Management's Response

This issue will be addressed under the Local Area Network upgrade, which is currently 1.4.8.9 ongoing.

Auditor General's Position

1.4.8.10 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

No Redundant Internet Connection Mini data center 1.4.9

Observation

- DSS01.05 of COBIT 5 Manage facilities. Manage facilities, including power and 1.4.9.1 communications equipment, in line with laws and regulations, technical and business requirements, vendor specifications, and health and safety guidelines.
- Libtelco provides internet service to the IFMIS Mini data center. However, there is no 1.4.9.2 alternative or redundant internet service provider for the IFMIS Mini data center. Alternative internet connection will ensure IFMIS accessibility over the internet at all-time.

Risk

- A single source of internet connection to the data center could lead to a single point of 1.4.9.3 failure.
- Additionally, once the internet goes down, IFMIS will not be accessible to anyone over the 1.4.9.4 internet which would heavily impact the Ministries and Agencies.



Recommendation

1.4.9.5 Management should provide a secondary source of internet connection to the data center to ensure IFMIS is accessible 24/7.

Management's Response

1.4.9.6 Management is considering this.

Auditor General's Position

1.4.9.7 We acknowledge management's acceptance of our finding and recommendation; however, management should ensure that is implemented timely. we will follow up on the implementation of the recommendation during subsequent audit.

1.4.10 Lack of annual budgeting of the ICT Unit

Observation

- 1.4.10.1 APO06.03.1 of COBIT 5 Create and maintain budgets. Prepare a budget reflecting the investment priorities supporting strategic objectives based on the portfolio of IT-enabled programmes and IT services. Implement a formal IT budget, including all expected IT costs of IT-enabled programmes, IT services and IT assets as directed by the strategy, programmes and portfolios.
- 1.4.10.2 It was noted that the ICT unit dose not prepare its own budget to reflect annual operational to identify expected IT/IS cost.

Risk

1.4.10.3 The lack of operational budget of the ICT unit might lead to IT/IS investment or operation been static.

Recommendation

1.4.10.4 Management should ensure that ICT unit prepares its annual operational budged that will include expected cost of investments, IT programs and IT services to support management strategic objectives.

Management's response

1.4.10.5 This is being considered by Senior Management

Auditor General's Position

1.4.10.6 We acknowledge management's acceptance of our finding and recommendation; however, Management should Prepare a budget that will reflect IT investment priorities to support the strategic objectives of the business. we will follow up on the implementation of the recommendation during subsequent audit.



1.5 Lack of Automated Interface Between IFMIS & Others Systems

1.5.1 Lack of automated interface between IFMIS and other applications

Observation

1.5.1.1 Revenue generated by the LRA Systems (ASYCUDA & SIGTAS) are recorded in TAS, and uploaded into IFMIS through an SQL interface. The interface is not automated and involves manual extraction of revenue transactions from TAS and data are imputed into IFMIS. Also, government borrowing Management Unit using the Commonwealth Secretariat Debt Recording Management System (CS-DRMS). However, there is no interface between the CS-DRMS and IFMIS to capture information on loans obtained for direct budgetary support.

Risk

- 1.5.1.2 The lack of interface between IFMIS and other systems and applications may result in differences of information been display.
- 1.5.1.3 Additionally, Manual intervention within the revenue data upload process makes the process prone to errors and misstatements

Recommendation

1.5.1.4 Management should ensure that automated interfaces are functional between IFMIS and the identified applications (IFMIS, TAS and CS-DRMS) to enable perfect functionality and creates a strong link between GOL vital Systems and applications; moreover, keeping the interface intuitive will enable staffs to work more efficiently and safe time which will improve productivity.

Management's response

1.5.1.5 As part of the PFM Reforms for Institutional Strengthening Project (PFMRISP), there is a plan to support integration of IFMIS with other key PFM systems across Government. This activity is scheduled to commence once the planned/ongoing system upgrades for key PFM systems such as ITAS, ASYCUDA, proposed EFT system, CSDRMS, AMP, etc have been completed.

Auditor General's Position

1.5.1.6 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.5.2 Lack of automated reconciliation

Observation

1.5.2.1 It was noted that the reconciliations unit at MFDP prepares bank reconciliations manually, although IFMIS has the functionality to perform automated bank reconciliations. This was attributed to the inability of the current IFMIS version (7.0) to interface with the software used by the Central Bank of Liberia (CBL).



1.5.2.2 Additionally, bank statements are provided by CBL in PDF format. The reconciliation unit then converts the PDF bank statement into Excel format, extracts the IFMIS cash ledger and then commences the manual reconciliation process.

Risk

1.5.2.3 This manual preparation of the bank reconciliations renders the process inefficient and prone to errors.

Recommendation

1.5.2.4 Management should engage the vendors to resolve the inability of IFMIS to interface with the CBL system to enable automation of the bank reconciliation process.

Management's response

1.5.2.5 As part of the PFM Reforms for Institutional Strengthening Project (PFMRISP), there is a plan to support integration of IFMIS with CBL's core banking application (T24) through the proposed EFT system. This integration is expected to support the rollout of EFT for government payments and automate reconciliation of bank accounts in IFMIS. Implementation of this activity is currently ongoing.

Auditor General's Position

1.5.2.6 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.5.3 Inability of end users to attach documents on IFMIS

Observation

- 1.5.3.1 According to the PFM Law in August 2009 and subsequent development of the PFM Reform Strategy and Action Plan (RS&AP) which highlighted the deployment of a robust information system to provide support to all PFM transactions and operation, together with timely, reliable and comprehensive reports at all levels. The PFM RS&AP also proposed the establishment of interfaces with key applications used in various government parastatals under the Ministry of Finance and Development Planning.
- 1.5.3.2 Most ministries and agencies require MFDP to process their payments on IFMIS. However, end users do not have a means to attach electronic or scanned copies of the underlying supporting documentation on IFMIS for these payments. Underlying supporting documents (attached to printed purchase orders and expense vouchers) for the transactions are physically transported to MFDP for final payment processing. The Electronic Data Management System (EDMS) that would enable the scanning of the documents is not fully functional and not available to the various institutions that are using IFMIS.

Risk

1.5.3.3 Turnaround time is increased due to physical movement of underlying supporting documents between units, thereby leading to inefficiencies within the business processes.



Recommendation

1.5.3.4 The EDMS should be deployed to the various ministries and agencies whose payments processing are carried out at MFDP, to enable the institutions attach electronic or scanned copies of documents on IFMIS to ensure efficiency in business processes.

Management's response

1.5.3.5 No response from management.

Auditor General's Position

1.5.3.6 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.6 IT SERVICE CONTINUITY

1.6.1 Threat to Business Continuity

Observation

- 1.6.1.1 Dss04.02 of COBIT 5 maintain a continuity strategy, evaluate business continuity management options and choose a cost-effective and viable continuity strategy that will ensure enterprise recovery and continuity in the face of a disaster or other major incident or disruption. Business continuity management proactively improves the enterprise's resilience against operational disruptions and provides the capacity to adequately react to threats.
- 1.6.1.2 We established that MFDP relies to a larger extent on information technology in making their daily transactions and operation. This means that any down time would result to financial losses to the Government of Liberia (GOL). An assessment of the readiness of MFDP in case of a major disruption revealed the lack of the following:
- 1.6.1.3 A. Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) are sets of activities that result in the ongoing preparedness for disaster that continually adapts to changes in business conditions for improvement. It describes the activities required to restore critical it systems and other critical assets, whether in alternate or primary locations.
- 1.6.1.4 B. Disaster Recovery Plan site is a location where an organization can relocate following a disaster for all its critical it systems.
- 1.6.1.5 C. Network redundancy is a process through which additional or alternate instances of network devices, equipment and communication mediums are installed within network infrastructure. It is a method for ensuring network availability in case of a network device or path failure and unavailability. As such, it provides a means of network failover.

Risk

1.6.1.6 Failure to developed and approved business continuity plan and disaster recovery plan may result in loss of transactions and data in situations where the impact of a major disruption on critical business functions occurs.



1.6.1.7 Additionally, the lack of an offsite backup facility could lead to loss of service to users, loss of credibility, incomplete and inaccurate records in the event of disaster.

Recommendations

- 1.6.1.8 Management should establish an IT continuity plan and disaster recovery plan as part of their risk management strategy. This will mitigate the impact of a major disruption on key business functions and recovery capability of all critical it services.
- 1.6.1.9 Additionally, the management of MFDP should obtain an offsite secure location backup facility to provide disaster recovery protection that will safeguard the business and it resources that are necessary for its recovery from future disaster.

Management's Response

1.6.1.10 Management is looking into this.

Auditor General's Position

1.6.1.11 We acknowledge management's acceptance of our finding and recommendation; however, management should ensure that there is a Business Continuity plan that will improves the enterprise's resilience against operational disruptions in a timely manner. we will follow up on the implementation of the recommendation during subsequent audit.

1.6.2 Inadequate data backup and recovery procedures

Observation

- 1.6.2.1 There was no evidence of supervisory review to confirm that backups were duly performed as required. Moreover, there was no formal process in place for backup restoration tests. Backup restorations were carried out on an event driven basis.
- 1.6.2.2 It was also noted that there were no periodic or regular testing of the backup files that are performed and certified by the owners of the information stored, and the ability to restore complete and accurate data in the case of emergency.

Rick

- 1.6.2.3 The lack of backup financial data been maintained regularly, might cause data lost.
- 1.6.2.4 Additionally, sensitive data which may have been misused or destroyed would go unnoticed; this may lead to financial and reputational damages.

Recommendation

1.6.2.5 Management should ensure that significant data are backed up on an appropriate basis and supervisory review of the backups should be performed and documented. A backup restoration test should be carried out periodically to ensure that business users can confirm the integrity and completeness of financial information. This would ensure that appropriate actions can be taken in providing solutions to the corrupted data, if any.



1.6.2.6 Test on restoration of backups for successfully restoration should be restored or reverted to the former condition in the event of emergency.

Management's response

1.6.2.7 No response from management.

Auditor General's Position

1.6.2.8 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.7 Incident and Problem Management

1.7.1 Ineffective issue resolution/management controls

Observation

- 1.7.1.1 DSS02.07 of COBIT 5 Track status and produce reports. Regularly track, analyses and report incident and request fulfillment trends to provide information for continual improvement
- 1.7.1.2 DSS03.01 of COBIT 5 Identify and classify problems. Define and implement criteria and procedures to report problems identified, including problem classification, categorization and prioritization.
- 1.7.1.3 DSS03.04 of COBIT 5 Resolve and close problems. Identify and initiate sustainable solutions addressing the root cause, raising change requests via the established change management process if required to resolve errors. Ensure that the personnel affected are aware of the actions taken and the plans developed to prevent future incidents from occurring.
- 1.7.1.4 During the audit there was no effective internal helpdesk system in place to identify and resolve issues in IFMIS production processing. Errors and user reported issues were not logged or tracked. Moreover, we reviewed two issues that were identified and escalated to the vendor on the Free Balance portal. The two issues were delay for eight (8) months and twenty-one (21) days; there were no indication to prove that the reported issues were resolved. **See Exhibit 8.**

Risk

1.7.1.5 The lack of incident response team or help desk to identify and track incident could lead to financial loss or affect data integrity that might not be promptly identified and resolved.

Recommendation

1.7.1.6 Management should identify problems through the correlation of incident reports, logs of user reported issues should be maintained and other problem identification resources, determine priority levels and categorization to address problems in a timely manner based on business risk.



1.7.1.7 Additionally, the service desk should monitor and track incident escalations, resolutions and request handling procedures to progress towards resolution or completion. Moreover, they should close resolved problem after confirmation of successful elimination of the known error. Senior management should periodically review and compare the service performance achieved with the goals and surveys of user departments to see if their needs are being met.

Management's Response

1.7.1.8 Plans are in advanced stages to procure a helpdesk management system to address this risk.

This activity is being supported by the PFMRISP. ToRS for a Helpdesk Management System were prepared and cleared by the World Bank. The procurement process is ongoing.

Auditor General's Position

1.7.1.9 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.8 Environmental Controls

1.8.1 Inadequate environmental security controls at the data centers

Observation

- 1.8.1.1 DSS05.05 of CoBit 5 manage physical access to IT assets, should define and implement procedures to grant, limit and revoke access to premises, buildings and areas according to business needs, including emergencies. Access to premises, buildings and areas should be justified, authorized, logged and monitored. This should apply to all persons entering the premises, including staff, temporary staff, clients, vendors, visitors or any other third party.
- 1.8.1.2 During the audit it was noted that the only physical security control was a key and lock at the entrance of the office area of the data center. Access into the data center from the office area is not restricted by either a key or biometric control. We also did not notice any surveillance controls such as closed circuit television (CCTV) system or security guard at the data center.
- 1.8.1.3 Additionally, there were no alarms or triggers in place to notify relevant security personnel should any breach occur.

Risk

1.8.1.4 Unauthorized personnel can gain access to the data center and physically damage the data center equipment thereby causing denial of service or non-availability of IFMIS application.

Recommendation

1.8.1.5 Management should ensure that surveillance controls such as CCTV system be installed to monitor activities in and around the data center.



1.8.1.6 Also, biometric security controls should be implemented at the data center to prevent and detect any unauthorized access to the data center. This will ensure accountability compared to lock and key currently in use.

Management's Response

1.8.1.7 The IFMIS and other key PFM systems are being moved to the national data center, hosted by LIBTELCO, which has most of the mentioned controls.

Auditor General's Position

1.8.1.8 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.8.2 Lack of Safety Equipment's

Observation

- 1.8.2.1 DSS01.04 of CoBit 5- manages the environment, a maintenance measures for protection against environmental factors. Install specialized equipment and devices to monitor and control the environment.
- 1.8.2.2 During the audit it was noted that MFDP has three environments that withhold IT equipment's. Namely, the Mini Data Center and Server-room, Old Data Center and National Data Center. The IFMIS data center at LIBTELCO and the data center at the Ministry of Finance and Development Planning buildings have no smoke detectors to alert relevant personnel when an incident occur and the fire suppression system which will reduce the risk of fire incidents at the data center.
- 1.8.2.3 The review shows that the mini data center has One (1) Fire extinguisher that is outdated, not functional and sitting on the floor of the Mini Data Center.
- 1.8.2.4 At the Old Data Center and Server Environment, there were three outdated fire extinguishers available for usage; moreover, staffs have not gone through fire drills to prepare for usages of the fire extinguishers.
- 1.8.2.5 At the National Data Center, there was no evidence to prove that staffs at the national data center practice fire drills to be knowledgeable and prepared to curtail fire disaster.

Risk

1.8.2.6 The lack of fire safety equipment and fire drills could lead to hazards that may damage staff's safety and office premises.

Recommendation

1.8.2.7 Management should train employees on how to use fire extinguishers and where to go during an emergency, it is crucial for complete safety. Furthermore, it's important to train your employees on what to do in the event of an emergency. Having an emergency action plan



that details where to go, what to do, and who is in charge in the event of an emergency is vital and can be lifesaving.

1.8.2.8 Management should ensure that safety equipment's are available, tested, or has a routine maintenance performed on a timely basis, fire safety equipment should include fire alarms, sprinkler systems, fire suppression systems, etc., need to be tested annually to ensure they are fully operational.

Management's Response

1.8.2.9 Senior Management is looking to address this.

Auditor General's Position

1.8.2.10 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.9 Reporting Requirements and Capabilities

1.9.1 IFMIS Reports not optimally utilized by end users

Observation

- 1.9.1.1 According to the PFM Law in August 2009 and subsequent development of the PFM Reform Strategy and Action Plan (RS&AP) which highlighted the deployment of a robust information system to provide support to all PFM transactions and operation, together with timely, reliable and comprehensive reports at all levels. The PFM RS&AP also proposed the establishment of interfaces with key applications used in various government parastatals under the Ministry of Finance and Development Planning.
- 1.9.1.2 IFMIS provides reports relevant to various business processes, some end users are not able to generate or work optimally with IFMIS reports. We noted that some staffs are unable to run their expenditure reports without the assistance of Financial Management Officers (FMO) or system administrators. Also some staffs are unable to run allotment to date reports which distinguish between recurrent and project expenditure within budget lines.

Risk

1.9.1.3 End users may not be able to efficiently obtain critical reports required for decision-making from IFMIS and may resort to manual record-keeping.

Recommendation

1.9.1.4 Management should implement adequate training for staff on how to generate reports relevant to their business processes.

Management's Response

1.9.1.5 No response from management.



Auditor General's Position

1.9.1.6 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.9.2 Inadequacy Coding Block

Observation

- 1.9.2.1 Section 47(4) of the Amended Public Finance Management Act 2009 provides that 'The Minister, in consultation with the Auditor General, shall issue the chart of accounts, which will conform to the structure prescribed for budgetary classifications specified in this Act and/or accompanying regulations'. In fulfillment of this requirement, the Minister of Finance issued a new Chart of Accounts for the Government of Liberia in April 2010. The new Chart of Accounts conforms to International Public Sector Accounting Standards, Government Finance Statistics (GFS) Manual 2001 and accommodates various types of reporting requirements prescribed under the Public Finance Management Act of 2009.
- 1.9.2.2 In line with the Amended PFM Act of 2009, GoL has adopted a Medium-Term Expenditure Framework (MTEF) that will guide the budget process and provide an opportunity for proper planning and allocation of resources to spending entities with effect from the fiscal year 2016/17. The MTEF is intended to facilitate greater macroeconomic balance; improved resource allocation; greater budgetary predictability for line Ministries and Agencies and more efficient use of public resources.
- 1.9.2.3 It was established that the general ledger of the 2018/2019 consolidated account that was pull from the IFMIS had unusual attribute in the coding block. The total number of 30,000 and more transaction records were found with (XXXXXXX) in the coding block and duplication. See exhibit 9.

Risk

1.9.2.4 Failure for management to inform employee or other user of the chart of account code could lead to incomplete and misleading information.

Recommendation

1.9.2.5 We recommend that management provide all necessary information including update of the chart of account to GOL spending entities, to conform to the structure prescribed for budgetary classifications and reporting requirements prescribed under the Public Finance Management Act.

Management's Response

1.9.2.6 The coding blocks with segments containing "XXXXX" values, are specifically linked to system control accounts to facilitate transaction processing on the system. Validation rules have been configured in the system to restrict access and use of those coding blocks.



Auditor General's Position

1.9.2.7 We acknowledge management's assertion; however, we maintain our finding and recommendation. Management should ensure that the chart of accounts is conform to the structure prescribed for budgetary classifications and specification. we will follow up on the implementation of the recommendation during subsequent audit.

1.10 Verification of IFMIS been Used Remotely in Four Counties

1.10.1 Inadequate Segregation of Duty (SOD)

- 1.10.1.1 D5506.03 of Cobit 5 states that, Manage roles, responsibilities, access privileges and levels of authority. Manage the business roles, responsibilities, levels of authority and segregation of duties needed to support the business process objectives. Authorize access to any information assets related to business information processes, including those under the custody of the business, IT and third parties. This ensures that the business knows where the data are and who is handling data on its behalf.
- 1.10.1.2 During the field visit to Bong and Nimba Counties, we observed that in Bong County the Treasury Office does not have Budget Officer. The Acting County Treasurer performs the task of both the Treasurer and Budget Officer. It was also noted that in both counties the functions of the Accounting Services Unit (ASU), treasury Unit and Check Writing Unit are all performed by the Treasurer. The ASU function is performed in processing the hard copy of the voucher while the other two functions are performed on the system.
- 1.10.1.3 The field visit to Bassa and Margibi counties also revealed that both counties do not process purchase Orders through IFMIS for all procurable items, but raise expenditure vouchers directly from the head office of MOH and MIA for all items procured, even although the two institutions have access to the purchasing module on IFMIS.

Risk

- 1.10.1.4 Lack of adequate segregation of duty could lead to errors or fraud been unnoticed.
- 1.10.1.5 Additionally, if all line ministries and agencies and counties fail to utilized the IFMIS fully might lead to delay in transactions processing.

Recommendation

1.10.1.6 Management should ensure that responsibilities are segregated among employees and for adequate checks and balances. One individual should not start a process from the beginning to end.

Management's Response

1.10.1.7 As part of the IFMIS implementation, a responsibility matrix which ensures segregation of duties was developed and this what guides the setup of users from MACs including Counties, on the system.



- 1.10.1.8 A procedure to review user access rights on the IFMIS against the responsibility matrix, on regular basis, will be put in place by August 2021.
- 1.10.1.9 However, it should also be noted that in some cases, segregation of duties on the system is comprised due to shortage of staff especially in the Counties. When this occurs, compensating controls are put in place.

Auditor General's Position

1.10.1.10 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.10.2 System Availability

Observation

- 1.10.2.1 AP001.08 of CobBit 5 Maintain compliance with policies and procedures. Put in place procedures to maintain compliance with and performance measurement of policies and other enablers of the control framework, and enforce the consequences of non-compliance or inadequate performance. Track trends and performance and consider these in the future design and improvement of the control framework requirements related to business, regulatory and social responsibilities.
- 1.10.2.2 We observed that system availability is a problem in both Bong and Nimba Counties. Since the Freebalance application is now web base, there is more need for internet connectivity. There was no evidence to prove that management had provided modem and scratch cards for the treasurer officer in Bong County; as a result the treasurer officer uses his mobile phone for internet connection.
- 1.10.2.3 Additionally, in Bong County the unstable electricity supply and internet service is seriously affecting system availability. Unlike Bong County, electricity supply in Nimba is for the most part stable but unstable internet service is affecting system availability.
- 1.10.2.4 Also in Grand Bassa county there is problem with internet connectivity due to lack of upgraded modem and there is no Internet Service Provider (ISP), moreover the treasurer officer uses his phone to connect to the internet. Electricity is unstable, the solar worked perfectly during the dry season and there is no standby generator.

Risk

1.10.2.5 This could directly affect the efficiency and effectiveness of staffs, and their ability to process transactions in a timely manner.

Recommendation

1.10.2.6 Management should engage the services of an Internet Service Provider (ISP) and a Service Level Agreement (SLA) signed to ensure optimal service.



1.10.2.7 Additionally, management should upgrade the internet modem to obtain network connectivity smoothly. Also obtain a standby generator to all remote sites.

Management's Response

1.10.2.8 As part of the IFMIS rollout under the PFMRISP project, management is exploring the possibility of using satellite technology and private telecommunication companies to provide IFMIS connectivity for entities in remote areas.

Auditor General's Position

1.10.2.9 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.

1.10.3 User Account and Password Sharing

Observation

- 1.10.3.1 The Use of MFDP's Information & Communications Technology (ICT) Resources portion of the Ministry of Finance and Development Planning ICT Security and Network Policy states that users (employees, vendors, and potential service providers) use access accounts and passwords that have been assigned to them, and not attempt to login to MFDP's domain without their assigned login credentials. It is expected that users maintained their login credentials at all times and not share such information to any other user whether co-workers, vendors, and potential service providers.
- 1.10.3.2 It is expected that users comply with instructions and guidance notes issued by designated information owners, system administrators, network administrators and/or the ICT Directorate on behalf of the MFDP. The policy states that passwords shall not be shared with anyone. All passwords are to be treated as sensitive, confidential MFDP information,
- 1.10.3.3 At the County Health Team (CHT) of both Bong and Nimba Counties, the Junior Accountant creates the transaction in the system; the Senior Accountant does the first level approval while the final approval is done by the County Health Services Administrator (CHSA). We observed in Nimba the Junior Accountant using the CHSA credential to log into CHSA account.
- 1.10.3.4 In Bong County, it was observed that the former Accountant of the CHT who is now employed with the National Aids Control Program (NACP) is still an active user. Moreover, he holds the credentials for additional two accounts; they are the current accountant and County Health Services Administrator. The CHSA will send an email to the former Accountant authorizing him to process the transaction, he then accesses all three accounts to process the transaction on the system.

Risk

1.10.3.5 Failure to implement logical security controls could lead to unauthorized access that might create, modify and delete critical information.



Recommendation

1.10.3.6 Management needs to carryout periodic security awareness on the danger of this practice and ensure that all necessary correction is done to protect the business information.

Management's Response

1.10.3.7 No response form management.

Auditor General's Position

1.10.3.8 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.10.4 Lack of Training to Remote users of the System

Observation

- 1.10.4.1 The Information & Communications Technology (ICT) Unit portion of the Ministry of Finance and Development Planning ICT Security and Network Policy provides that The ICT Unit shall in its annual work plan provide ICT clinic/ training services to all MFDP personnel. Training sessions should cover topics on information security awareness and use of ICT equipment/ materials, and ICT office applications. This by extension applies to all Free balance users across government since the Comptroller and Accountant General owns the system
- 1.10.4.2 The Ministry of Internal Affairs (MIA) and the Ministry of Health (MOH) are the two entities currently using IFMIS in the counties. The MIA users are the Superintendent, Assistant Superintendent for Fiscal Affairs and the County Comptroller and the procurement officer. The users in both counties have had no training in the usage of the system. Those that were trained are no longer working with the county administrations. The current accountant of the County Health Team (CHT) in Bong County also has no training on the usage of the system.

Risk

1.10.4.3 Failure to provide training could slow down operations or lead to errors.

Recommendation

1.10.4.4 Management must provide training to users before they are placed on the system to ensure operational efficiency and effectiveness.

Management's Response

1.10.4.5 IFMIS functional training workshops for all users in MACs including Counties connected to IFMIS is being planned under the PFMRISP project and is tentatively scheduled to commence in July 2021

Auditor General's Position

1.10.4.6 We acknowledge management's acceptance of our finding and recommendation; we will follow up on the implementation of the recommendation during subsequent audit.



1.10.5 No Assigned Account for users with responsibility on the system

Observation

- 1.10.5.1 The User Access Management portion of the Ministry of Finance and Development Planning ICT Security and Network Policy provides that all users shall have a unique identifier (user ID) as their unique ID, and a suitable authentication technique (active directory services) shall be configured to authenticate user's login identity. This by extension applies to all Free balance users across government since the Comptroller and Accountant General owns the system.
- 1.10.5.2 Users are placed on the system based on the portfolio they occupied to enable them perform their tasks.
- 1.10.5.3 During our review of users in the counties, we observed that the Superintendent of Nimba County who should be carrying out final approval actions does not have a user account. Also the Procurement Officer of Bong County who should be preparing purchase order on the system does not have a user account.

Risk

1.10.5.4 This could hamper the timely processing of transactions.

Recommendation

1.10.5.5 All employees who assumed position that require them being placed on the system should be trained before obtaining access right on the system.

Management's Response

1.10.5.6 No response from management.

Auditor General's Position

1.10.5.7 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.10.6 Computer not on MFDP Domain

Observation

- 1.10.6.1 The User Access Management portion of the Ministry of Finance and Development Planning ICT Security and Network Policy provides that all users shall have a unique identifier (user ID) as their unique ID, and a suitable authentication technique (active directory services) shall be configured to authenticate user's login identity. The policy also states that it is mandatory that all computers are to be configured on MFDP domain so as to enable IT administrators to properly manage the directory and other resources of the network.
- 1.10.6.2 The County Treasurer in Nimba County is using a desktop computer assigned to that office by the Ministry of Finance and Development Planning (MFDP). During an assessment of the desktop, it was observed that the desktop is not on MFDP's domain. No windows authentication is required to access information stored on the computer. Also, the computer does not have antivirus installed on it.



Risk

1.10.6.3 In the absence of stringent logical access controls could lead to the unauthorized alteration and disclosure of sensitive information.

Recommendation

1.10.6.4 Management should ensure that all MFDP's computer are on their domain and are adequately protected.

Management's Response

1.10.6.5 No response from management.

Auditor General's Position

1.10.6.6 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.10.7 Purchase orders not processed on IFMIS by some MACs:

Observation

- 1.10.7.1 During our review of user's access in both Bassa and Margibi Counties, we observed that the Superintendent and accountants do not have access on the IFMIS, only the treasurer officer performed all the tasks in both counties, moreover there is no structure in place to carrying out final approval.
- 1.10.7.2 Our inquiries revealed that POs are not raised due to the lack of a fully functional procurement unit at both Bassa and Margibi Counties Offices. They do not process purchase Orders through IFMIS for all procurable items, but raise expenditure vouchers directly for all items procured, although the two institutions MOH and MIA have access to the purchasing module on IFMIS.
- 1.10.7.3 The processes used in the above counties are inconsistent with the IFMIS workflows for processing purchases.

Risk

1.10.7.4 Failure to process purchasing orders on IFMIS may therefore lead to incomplete management financial information about commitments and obligations on IFMIS.

Recommendation

1.10.7.5 Management should ensure that procurement functions within Ministries and Agencies are strengthened and monitored from time to time, to ensure that unit users of IFMIS are processing purchase orders. Where staffs have challenges processing transactions, relevant documentation should be submitted to the Accounting Services Unit (ASU) to process the transaction on IFMIS.



Management's Response

1.10.7.6 No response from management.

Auditor General's Position

1.10.7.7 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.

1.10.8 IFMIS Environment Unprotected Remotely

Observation

- 1.10.8.1 DSS01.04 of CoBit 5- manages the environment, a maintenance measures for protection against environmental factors. Install specialized equipment and devices to monitor and control the environment.
- 1.10.8.2 The result of our review shows that the Grand Bassa service center was the first service center open in 2016. The computer that is used by the treasurer officer is obsolete. The split unit that was presented by IPFMRP has not been turn on since it's the instillation.
- 1.10.8.3 Additionally, in Grand Bassa County there is no save in the treasurer office to stored sensitive documents including checks.
- 1.10.8.4 Furthermore, there is no file cabinet, documental files are not properly arranged and stored.
- 1.10.8.5 Also in Margibi County there was no save, the treasure officer carry with him booklet of checks and printed check for safekeeping. There is no file cabinet to store document file.

Risk

- 1.10.8.6 If management fails to properly equip the staffs that access the system remotely, this may cause IFMIS not to achieve its objectives.
- 1.10.8.7 The lack of save to keep financial instrument remotely might lead to misappropriate of funds.

Recommendation

- 1.10.8.8 Management should ensure that equipment's are up to date to meet the objectives of IFMIS.
- 1.10.8.9 Additionally, management should provide safe and file cabinet for counties that are using IFMIS remotely to safeguard information assets in a timely manner.

Management's Response

1.10.8.10 No response from management.

Auditor General's Position

1.10.8.11 In the absence of a response, we maintain our finding and look forward to implementation our recommendation in subsequent audit.



Prior Year's Audit Matter

Status of Implementation of Prior Year Audit Recommendations

| Audit Periods | Audit Findings | Recommendations | Status of Implement ation | Comments |
|---------------------------------|---|--|---------------------------------|--|
| July 1, 2010- June 30, 2017. | IFMIS IT risk assessment has not been performed or documented | Appropriate IT risk assessment policies and procedures should be documented on the IFMIS project and based on security categorizations. The IFMIS information systems should be categorized based on the potential impact that the loss of confidentiality, integrity, or availability would have on IFMIS operations, assets, or individuals. Risks should be reassessed for the system, and application levels on a periodic basis or whenever systems, applications, facilities, or other conditions change. | Not implemented | |
| July 1, 2010- June 30, 2017. | procedural manuals have not been documented | IT processes and procedures should be documented, approved at appropriate levels of management and reviewed frequently, as it demonstrates the "tone at the top" and attitude of management towards risks and control activities. It also influences the awareness and consciousness of members of staff towards control activities, and mandates IT management to enforce adherence to procedures designed. | Partially implemented | There were draft IFMIS procedural manuals, but not approve and sign. |
| July 1, 2010- June 30, 2017. | Internal reviews of IT operations on IFMIS are not Performed / documented | Management should ensure a periodic comprehensive internal review of IT operations and activities on IFMIS application and supporting infrastructures is performed and issues identified should be resolved on a timely basis. | Not implemented | |
| July 1, 2010- June 30, 2017. | Performance evaluations of IFMIS support teams are not performed/docu mented | Periodic performance evaluations should be performed and documented for the IFMIS support staff. Training needs should be identified for each personnel and all IT staff should attend relevant training to keep them up to date in their required skills. | Not implemented | |



| July 1, 2010- June 30, 2017. | Inadequate segregation of IT duties and functions | Duties and responsibilities within the IFMIS support teams should be appropriately segregated to ensure no one user has administrative rights on all platforms and that all IT processes and procedures require oversight and authorization. | Partially implemented | Management is yet to put in place the requisite governance structures (e.g IT Steering Committee etc) to provide oversight of IFMIS. |
|---------------------------------|---|--|-----------------------|--|
| July 1, 2010- June 30, 2017. | Inadequate security awareness program | An ongoing security awareness program should be implemented that includes security briefings and training that is monitored for all IFMIS users. Training should be documented and monitored. Security awareness should be maintained by informing users of the importance of the information they handle and the legal and business reasons for maintaining its integrity and confidentiality. | Not implemented | |
| July 1, 2010- June 30, 2017. | Inadequate user access administration procedure on IFMIS and its supporting infrastructure components | Policies and procedures for authorizing logical access to information resources (including databases and operating systems) should be instituted and such authorizations should be adequately documented and maintained. Management should ensure that access request is appropriately reviewed and approved before granting users access to all information systems. Approved authorizations should be maintained on file. Preferably, the user access authorization process should be automated to facilitate coordination, compliance and record-keeping. | Partially implemented | |

| July 1, 201 June 30, 2017. | · | Terminations, transfers, and promotions of IFMIS user across the ministries could be promptly communicated to the IFMIS system administrator. Inactive accounts and accounts for terminated or resigned IFMIS users and contractors should be disabled, removed, or adjusted in a timely manner.AQ | Not implemented | |
|--|---|--|-----------------------|--|
| July 1, 2010- June 30, 2017. | Inadequate user authentication and password controls | Users should be appropriately identified and authenticated through logical access controls. Logical controls should be designed to restrict legitimate users to the specific systems, programs and files that they need and prevent others, such as hackers, from entering the system at all. | Partially implemented | At the windows level, the recommendati on is largely implemented but at the application it is yet to be implemented. |
| July 1, 2010- June 30, 2017. | Inadequate security configurations on database and operating system servers | Management should ensure that key security parameters on the database and operating systems are set up to enhance security in line with the Information System (IS) policy and best practices. | Not implemented | |



| July 1, 2010- June 30, 2017. | Inadequate change management controls Inadequate data backup and recovery procedures | Changes to system environments, application functionality, and business processes should be proactively managed to reasonably assure financial data and process integrity. Access to program modifications and changes to configurable objects in the production environment should be restricted and monitored. Changes to information systems should be properly tracked; tested by appropriate personnel; and adequately reviewed for approvals prior to being moved to production. Proper documentation of all these activities should be maintained. Financially significant data should be backed up on an appropriate basis and supervisory review of the backups should be performed/documented. A backup restoration test should be carried out periodically, to ensure that business users can confirm the | Not implemented Not implemented | |
|---------------------------------|---|---|----------------------------------|--|
| July 1, 2010- June 30, 2017. | Inadequate disaster recovery controls | A disaster recovery plan should be implemented. The plan should: be based on clearly defined contingency planning policy, reflect current conditions, be approved by key affected groups. | Not implemented | |
| | | key affected groups, clearly assign responsibility for recovery, include detailed instructions for restoring operations, identify the alternate processing facility and the backup storage facility, include procedures to follow when the data/service center is unable to receive or | | |



| | T | | I | I |
|---------------------------------|---|--|--------------------------|---|
| | | transmit data, identify critical data files and be detailed enough to be understood by all stakeholders. Lastly, the plan should also be periodically tested under conditions that simulate a disaster. | | |
| July 1, 2010- June 30, 2017. | Incident and Problem Management | Records should be maintained on the IFMIS application, database and network performances in meeting user needs. Logs of user reported issues should also be maintained. Problems and delays encountered, the reason, and the elapsed time for resolution should be recorded and analysed to identify recurring patterns or trends. Senior management should periodically review and compare the service performance achieved with the goals and surveys of user departments to see if their needs are being met. | Not implemented | |
| July 1, 2010- June 30, 2017. | Lack of an IFMIS business processes manual or documentation | Management should prepare a comprehensive IFMIS procedural manual depicting the workflows within each business process and ensure they are made available to all end users at the various Ministries and Agencies. | Partially implemented | Management has a draft manual that is yet to approved and become operational. |
| July 1, 2010- June 30, 2017. | Purchase orders not processed on IFMIS by some MACs | Management should ensure that procurement functions within Ministries and Agencies are strengthened and monitored from time to time, to ensure that unit uses I FMIS in processing purchase orders. Where staff have challenges processing transactions, relevant documentation should be submitted to the Accounting Services Unit (ASU) to process the transaction on IFMIS. | Not implemented | |
| July 1, 2010- June 30, 2017. | Manual preparation of bank reconciliations | Management should engage the vendors to resolve the inability of IFMIS to interface with the CBL system to enable automation of the bank reconciliation process. | Not implemented | |
| July 1, 2010- June 30, 2017. | Inability of end users to attach documents on IFMIS | The EDMS should be deployed to the various ministries and agencies whose payments processing are carried out at MFDP, to enable the institutions attach electronic or scanned copies of documents on IFMIS to ensure efficiencies in business processes. | Partially implemented | The EDMS is currently being implemented at MFDP but is yet to rolled out to other MACs. |



| July 1, 2010- June 30, 2017. | Budget preparation not per formed on IFMIS | We recommend that management should engage the vendor to provide the budget preparation module in order to ensure that budget preparation and execution are done on IFMIS and to avoid potential errors or manipulations that are | Not implemented | |
|---------------------------------|--|--|--------------------|--|
| July 1, 2010- June 30, 2017. | CSM module not used for payroll processing for all ministries and agencies | possible in the current process. Management should strengthen the recruit process in autonomous, restructured and state-owned institutions by requiring the institutions to seek clearance from the CSA anytime they are engaging staff who have worked in a previous government institution or are above the retirement age to ensure that the staff is not on the payroll. Management should also require payroll processing for all government sector institutions to be performed on IFMIS, so that unique employee IDs will prevent duplication of staff records in both pension payroll and general payroll. | Not implemented | |
| July 1, 2010- June 30, 2017. | Lack of automated interface between IFMIS and other applications (TAS and CS- DRMS) | Management should implement automated interfaces between IFMIS and the identified applications (TAS and IFMIS). | Not implemented | |
| July 1, 2010- June 30, 2017. | Inability of approvers to sort approval requests by transaction type | We recommend that management should engage the vendor to resolve the issue. | Not implemented | |
| July 1, 2010- June 30, 2017. | Inadequate controls over standing data maintenance | Management should ensure reviews and approvals are required on IFMIS before uploads and /or modifications are made to key standing data. | Not implemented | |
| July 1, 2010- June 30, 2017. | No approval process for additions to the vendor listing | We recommend that updates to vendor listing on IFMIS should be authorised by senior management personnel from the relevant ministry or agency that is requesting the update. | Not implemented | |
| July 1, 2010- June 30, 2017. | Inadequate segregation of duties on IFMIS purchasing business process | Creation of GRN on IFMIS should be assigned to staff responsible for receiving items supplied by vendors to prevent the risk that items not received will be paid for. | Not implemented | |



| July 1, 2010- June 30, 2017. | Expenditure vouchers created on IFMIS after payments have been completed | IFMIS procedural manuals should be developed and shared with end users in the various institutions to ensure that users have guidance in performing their duties. Management should also monitor to ensure compliance with set guidelines. | Not implemented |
|---------------------------------|--|---|--------------------|
| July 1, 2010- June 30, 2017. | Description not set as required field for salary transition processing | Description field for salary transitions should be set as a required field. Management should ensure that accurate and complete descriptions have been provided to all salary transitions before approval of the transactions. | Not implemented |
| July 1, 2010- June 30, 2017. | Poor audit trail function on IFMIS | The GoL should liaise with the IFMIS software vendor to investigate and resolve the abnormally in the audit history function on the application. | Not implemented |
| July 1, 2010- June 30, 2017. | Transactions initiated and approved by same users on IFMIS | Management should investigate transactions that were created and approved by same users on IFMIS to authenticate their validity and rationale. More importantly, we recommend that a detailed segregation of duties review should be performed urgently. | Not implemented |
| July 1, 2010- June 30, 2017. | Users with profiles not commensurate with their roles and functions | System administrators should liaise with the heads of institutions that use IFMIS to review user roles and functional classes, to ensure that end users have access to only modules, components and actions that are relevant to the tasks they are required to perform on IFMIS. | Not implemented |
| July 1, 2010- June 30, 2017. | Shared credentials by end users for transaction processing | Management should undertake information security awareness programs for staff to ensure that end users understand the risks involved in sharing user profiles with other users. | Not implemented |
| July 1, 2010- June 30, 2017. | IFMIS Reports not optimally utilized by end users | Management should implement adequate training for staff on how to generate reports relevant to their business processes. | Not implemented |
| July 1, 2010- June 30, 2017. | Deficiencies in network security | The web application layer for external users should be separated from the internal web server. The external web server should be placed in a DMZ and isolated from the internal network. Divertive controls such as honey ports and | Not implemented |



| | | dummy servers should be placed in the DMZ to divert or distract malicious users from attacking the internal IFMIS infrastructure. • A multi-layer firewall architecture with multiple subnets between the private network and the internet should be considered for implementation on the IFMIS network. Each firewall in the multilayer architecture should have stringent filtering rules to restrict | | |
|---------------------------------|--|---|--------------------|--|
| | | traffic only to and from trusted sources. • Host intrusion prevention systems (HIPS) should be implemented on all workstations connected to the IFMIS network to ensure that security vulnerabilities not detected by the network devices such as the firewall and antivirus could be addressed by the HIPS. A multi-layer security approach will ensure the IFMIS system is protected from security risk such as cyber-attacks, phishing | | |
| July 1, 2010- June 30, 2017. | Inadequate Resources for failover to passive node on the IFMIS application and database clusters | and zero-day vulnerabilities. The current resources on the IFMIS application, web and database servers should be upgraded to meet the vendor recommended requirement or up graded to comply with a reasonable percentage of the requirements. | Not implemented | |
| July 1, 2010- June 30, 2017. | User Credential sent in clear text | Secure Sockets Layer (SSL)/Transport Layer Security (TLS) is a protocol developed for transmitting private channels via the internet. SSL/TLS works by using a private key to encrypt data that is transferred over the SSL/TLS connection. It is very important to correctly use SSL/TLS for critical financial transactions as occurs in the IFMIS application. Any page that solicits sensitive information such as passwords must be transmitted using SSL/TLS to prevent an attacker from submitting an imitation page that does not use SSL/TLS. • We also recommend that password alternatives should be locked a. A solution to sending username/password combinations | Not implemented | |

| July 1, 2010- June 30, 2017. | End of Life of computing and network equipment | to web application and websites is to use single sign – on or delegated authorization technology, such as security Assertion Markup Language (SAML), Open Id and Open Authorization (OAuth). A team should be constituted to evaluate the cost- benefit analysis on the critical IFMIS system servers and network infrastructure and decide whether to upgrade the aging equipment or an extension of the support license should be | Not implemented | |
|---------------------------------|--|--|--------------------------|--|
| July 1, 2010- June 30, 2017. | Outdated firmware on the network devices | arrange with the vendors. An inventory of all the operating systems of the network devices should be updated and latest vendor patches for these devices should be tested and applied on all these devices. | Not implemented | |
| July 1, 2010- June 30, 2017. | Bandwidth test from government agencies to the Libtelco data center | Network monitoring tools should be deployed to understand the current network bottlenecks and corrective actions to be taken to address the bottlenecks on the network. | Not implemented | |
| July 1, 2010- June 30, 2017. | Limited available capacity for the IFMIS production storage environment | Additional storage volumes should be made available on the IFMIS production server. | Partially implemented | |
| July 1, 2010- June 30, 2017. | Status of computers and network devices deployed | A mechanism for tracking incidents and problems on the IFMIS environment should be put in place. End users should be able to either call a help desk center or send an email to a help desk. Incident request numbers should be given to users after the issue is logged by the help desk agent. This will aid users obtain the status of their incidents should they reach out to the help desk. | Implemented | IFMIS had to deploy equipment when using the client server environment; since going web base, users can access the application using their entity assigned machines. |
| July 1, 2010- June 30, 2017. | Inadequate physical security controls at the IFMIS data center | • A team responsible for designing a physical security program should be put in place. The physical security team should continually improve the program using defence in depth methods. | Not implemented | |



| | | 0 " | I | |
|----------------|---|---|-------------|--|
| | | Surveillance controls such as CCTV system should be installed to monitor activities in and around the data center. The security system should also have multiple points and "multiple sets of eyes "tasked with monitoring the cameras. On-site monitoring through security guards should be implemented at the data center as an additional layer of physical security to provide redundancy in the security posture of the data center. Biometric security controls should be implemented at the data center to prevent and detect any unauthorized access to the data center. This will ensure accountability compared to lock and key currently in use. | | |
| July 1, 2010- | Inadequate | Environmental security controls | Not | |
| June 30, 2017. | environmental security controls at the data center | such smoke detectors, humidity controls, fire suppression systems, and fire extinguishers should be installed, monitored, tested and maintained on regular basis to protect a critical system such as the IFMIS application. | implemented | |
| July 1, 2010- | Redundant | The data center manager should | Not | |
| June 30, 2017. | power supply at the data center is not available | determine the power redundancy based on availability requirements, and determine the power capacity requirement based on hardware configuration. After the availability requirements have been determined, two redundant alternating current (AC) line feeds with back-up generator on auto transfer switch should be connected to the data center. During normal operation, the equipment load should be shared across both feeds, where a single feed is capable of supporting the entire equipment load during a planned or unplanned loss of a single feed. | implemented | |
| July 1, 2010- | No contract | A formal contract should be drafted | Not | |
| June 30, 2017. | agreement or SLA between Libtelco and MFDP for hosting the IFMIS infrastructure | and signed by both parties to ensure the smooth operations of the data center. | implemented | |



| July 1, 2010- June 30, 2017. | Twisted pair used to connect Libtelco and the IFMIS data center | Management should switch the connectivity between the Libetco and the IFMIS data center to a fibre connection to reduce traffic bottleneck on the IFMIS network. | Partially implemented |
|---------------------------------|---|--|-----------------------|
| July 1, 2010- June 30, 2017. | No redundant internet connection at IFMIS data center | A secondary source of internet should be considered and connected to the data center to ensure IFMIS is accessible to all times in case the primary internet connection goes down. | Not implemented |
| July 1, 2010- June 30, 2017. | Poor patch management practices | A patch management policy and procedure should be documented and approved by IT management. The documented policy should at a minimum contain a process for monitoring new and existing vulnerabilities on the IFMIS infrastructure and a process for evaluating security patches and also resolving security vulnerabilities. A central patch management such as Windows Server Update Services (WSUS) or System Center Configuration Manager (SCCM) should be implemented to manage patches and assets on the IFMIS network. To further secure the network, a Network Access Control (NAC) should be implemented as an endpoint security control and prevent network devices from accessing the network until they meet internal policy requirement such as anti-virus protection level, system patch level and configuration. | Not implemented |
| July 1, 2010- June 30, 2017. | Monitoring of network activities is not performed | To assist in identifying potential problems even before users start complaining, the data/system/network/security administrators need to be aware of what is normal on the network. Baselining network behaviour over a couple of weeks or months will assist the administrators to understand what normal behaviour in the network is. Once normal or baseline behaviour of the various elements and services in the network are understood, the information can be used by the administrators to set threshold values for alerts. | |

| | | Ministry of Finance and Development Planning should put in place a policy on the relevant personnel to be alerted when a malfunction occurs, or a potential security problem is detected. This, in turn, can reduce the time needed for analysis which further reduced the mean time to repair. Network monitoring tools should be evaluated based on the policy requirements and implemented to assist data center administrators in taking proactive steps to ensure the availability of the IFMIS | | |
|---------------------------------|--|---|--------------------|--|
| July 1, 2010- June 30, 2017. | Vulnerability assessment is not performed | infrastructure. A full network vulnerability assessment and penetration test should be planned and executed by a qualified organization. Additionally, a plan should be put in place to ensure this test is conducted at least once a year. • Continuous inventory of all devices in the IFMIS infrastructure should be performed to assist with the planning of upgrades and future assessments. This information can also be used to organize a distribution list of future exposures that may affect those systems. This will be a proactive step in securing the IFMIS infrastructure. • Continuous monitoring of network activities and security incidents should be monitored and any unusual activities should be documented and followed up for | Not implemented | |
| July 1, 2010- June 30, 2017. | No evidence to confirm review of audit logs on network devices are performed | resolution. • A process and frequency for conducting review should be clearly documented and communicated to those who will be involved in it. User access violation reviews must be performed in collaboration with the relevant data owners • Management should also consider implementing an assess control matrix to help identify conflicting roles and responsibilities on network equipment. This will enhance the access review process and ensure that adequate segregation of duties is enforced. | Not implemented | |

| July 1, 2010- June 30, 2017. | No baseline security documentation | • Log analyzers should be implemented to automate the auditing and analysis of logs. These logs can tell you what has happened or is happening, and revealing unauthorized activity or abnormal behaviour. Security information and event management (SIEM) solution should be considered for implementation to provide threat detection and security incident response through the real-time analysis of security alerts and events generated by the network and applications. Adopting standards for network, server and desktop systems is one step in developing a more-secure IFMIS network. This will result in risk reductions by eliminating the "low-hanging fruit" vulnerabilities, and will make sure that new systems begin service in a known-state. A baseline security policy should be documented and approved by management. Once approved, data | Not implemented | |
|---------------------------------|--|--|--------------------|--|
| July 1, 2010- June 30, 2017. | Regular maintenance of network and data center equipment | center administrators should baseline all devices on the network. • A maintenance schedule and logging for all network and data center equipment should be documented and tested on a periodic basis. Procedures should be put in place to ensure that appropriate review of the documented maintenance activities is performed. • An SLA between Union Strong and Ministry of Finance and Development Planning should be documented and approved. This SLA should at a minimum include a termination clause, penalties, defined targets and metrics. | Not implemented | |

Exhibits

Exhibit 1: Inadequate placement of the firewall and Demilitarized Zone (DMZ)

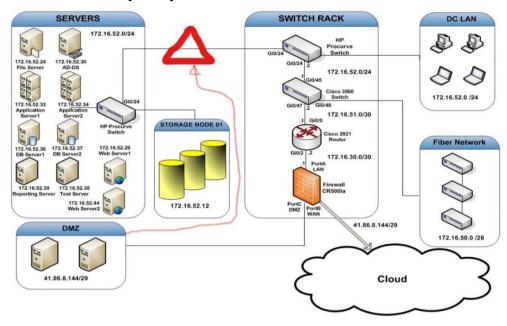
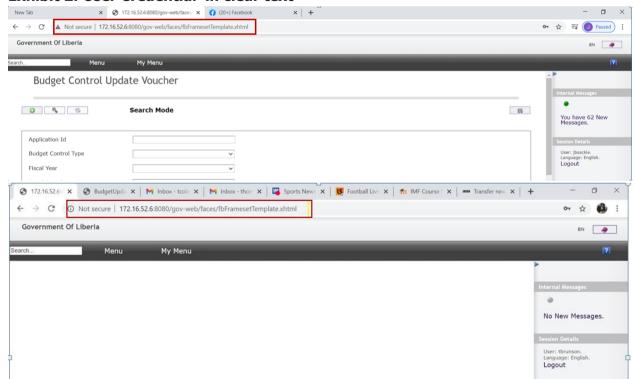


Exhibit 2: User Credential in clear text





CHECK TCP PORTS 41.86.8.146 Tested from United States on Dec 2, 2020 12:10 PM Port http

https

| URL | Protocol |
|--------------------------------|----------|
| http://ifmis.mfdp.gov.lr/ | http/1.1 |
| https://ifmis.mfdp.gov.lr/ | http/1.1 |
| s://ifmis.mfdp.gov.lr/gov-web/ | http/1.1 |
| v.lr/gov-web/faces/login.xhtml | http/1.1 |
| p-28r1s3-en-ltr-safari-cmp.css | http/1.1 |
| web/adf/jsLibs/Common1 2 13.js | http/1.1 |
| dp.gov.lr/gov-web/js/client.js | http/1.1 |
| b/images/HeaderBackgroundX.png | http/1.1 |
| ov-web/images/Liberia Flag.jpg | http/1.1 |
| | |

Exhibit 3 Unresolved issues on the console log

Find out how does your site perform against more than 50 essential metrics

RUN AUDIT

443

ifmis.mfdp.gov.lr(41.86.8.146) is hosted on Lbtelco Tested from United States on Dec 2, 2020 11:31 AM Performance Score 36 Best Practices Score 77 SEO Score Loaded In



Exhibit 4 Non configuration of Policies on the Active Directory

Advanced Audit Policy Configuration Advanced Audit Policy Configuration settings can be used to provide detailed control over audit policies, identify attempted or successful attacks on your network and resources, and verify compliance with rules governing the management of critical organizational assets.

When Advanced Audit Policy Configuration settings are used, the "Audit: Force audit policy subcategory settings (Windows Vista or later) to override audit policy category settings" policy setting under Local Policies\Security Options must also be enabled.

More about Advanced Audit Configuration

Mhich editions of windows support Advanced Audit Configuration?

A summary of the settings is provided below: Categories Configuration Account Management Detailed Tracking Configured Configured DS Access Not configured Logon/Logoff Object Access Not configured Configured Policy Change Configured Privilege Use Not configured
System Configured
Global Object Access Auditing Not configured

| ocal Policies/Audit Policy | | |
|--|--------------------|--|
| Policy | Setting | Winning GPO |
| Audit object access Audit policy change | Success Success | Default Domain Controllers Policy Default Domain Controllers Policy |
| Audit system events | Success | Default Domain Controllers Policy |

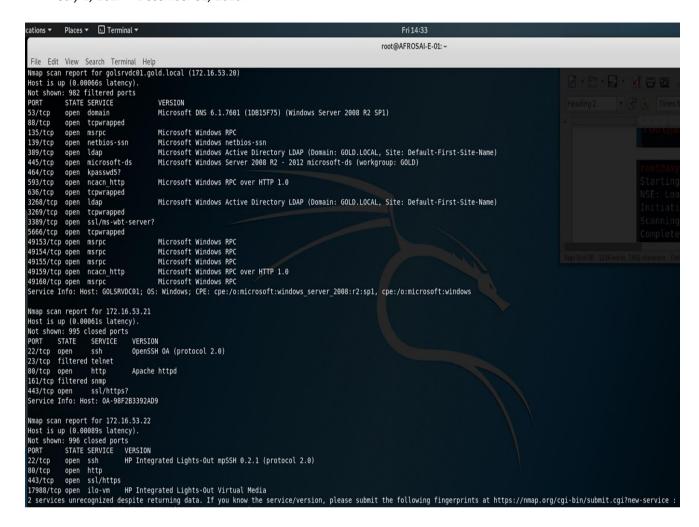
Exhibit 5 Improper configuration Setting

| Policy | Setting | Winning GPO |
|---------------------------------------|--|-----------------------------------|
| Access this computer from the network | Everyone, Authenticated Users, Administrators, Pre-Windows 2000 Compatible Access, FNTERPRISE DOMAIN CONTROLLERS | Default Domain Controllers Policy |
| Add workstations to domain | Authenticated Users | Default Domain Controllers Policy |
| Allow log on locally | Administrators, Account Operators, Server Operators, Print Operators, Backup Operators | Default Domain Controllers Policy |
| Restore files and directories | Administrators, Server Operators, Backup Operators | Default Domain Controllers Policy |
| Shut down the system | Administrators, Server Operators, Print Operators, Backup Operators | Default Domain Controllers Policy |

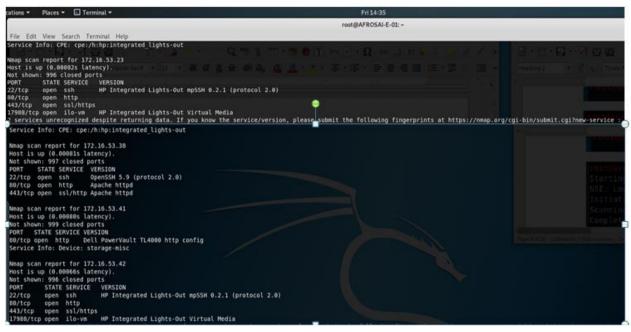
Exhibit 6 Open Ports with legitimate Services

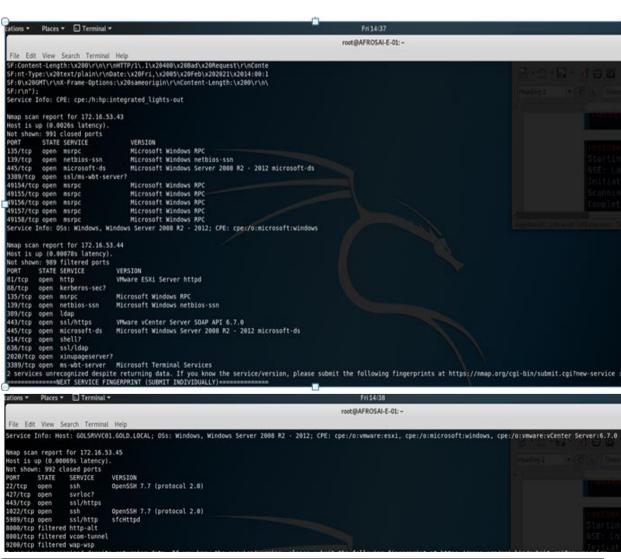
```
Nmap scan report for 172.16.30.1
Host is up (0.00080s latency).
Not shown: 996 filtered ports
PORT
         STATE SERVICE
                            VERSION
22/tcp
         open
                tcpwrapped
53/tcp
         open
                tcpwrapped
8090/tcp open
                tcpwrapped
8443/tcp open tcpwrapped
Nmap scan report for 172.16.30.2
Host is up (0.0010s latency).
Not shown: 998 closed ports
PORT
        STATE SERVICE
                           VERSION
22/tcp
        open
               ssh
                           Cisco SSH 1.25 (protocol 1.99)
               ssl/https?
443/tcp open
Service Info: OS: IOS; CPE: cpe:/o:cisco:ios
```













```
map scan report for 172.16.53.46
fost is up (0.00062s latency).
fot shown: 992 closed ports
for STATE SERVICE VERS
127/tcp open ssh Open
127/tcp open svrloc?
                                                                                      VERSION
OpenSSH 7.7 (protocol 2.0)
```

```
Nmap scan report for 172.16.53.47
Host is up (0.011s latency).
Not shown: 999 filtered ports
PORT STATE SERVICE VERSION
3260/tcp open iscsi?
Nmap scan report for 172.16.53.48
Host is up (0.013s latency).
Not shown: 999 filtered ports
```

```
Nmap scan report for 172.16.53.47
Host is up (0.011s latency).
Not shown: 999 filtered ports
PORT STATE SERVICE VERSION
3260/tcp open iscsi?
 Nmap scan report for 172.16.53.48
Host is up (0.013s latency).
Not shown: 999 filtered ports
PORT STATE SERVICE VERSION
3260/tcp open iscsi?
 Nmap scan report for 172.16.53.49
Host is up (0.015s latency).
Not shown: 999 filtered ports
PORT STATE SERVICE VERSION
3260/tcp open iscsi?
Nmap scan report for 172.16.53.50
Host is up (0.016s latency).
Not shown: 999 filtered ports
PORT STATE SERVICE VERSION
3260/tcp open iscsi?
Namap scan report for 172.16.53.51
Host is up (0.00051s latency).
Not shown: 990 filtered ports
PORT STATE SERVICE VERSION
22/tcp closed ssh
80/tcp open http VMware ESX1 Server httpd
427/tcp open svrloc?
443/tcp open ssl/https VMware ESX1 SOAP API 6.7.0
902/tcp open ssl/wware-auth VMware Authentication Daemon 1.10 (Uses VNC, SOAP)
5988/tcp closed wbem-http
5989/tcp open http-alt?
8300/tcp open http-alt?
8300/tcp open ssl/soap gSOAP 2.8
Service Info: Host: golsrvesx07.gold.local; CPE: cpe:/o:vmware:esx1, cpe:/o:vmware:ESX1:6.7.0
Namp scan report for 172.16.53.52
Host is up (0.00055s latency).
Not shown: 990 filtered ports
PORT STATE SERVICE VERSION
22/tcp closed ssh
80/tcp open http VMware ESXi Server httpd
427/tcp open svrloc?
443/tcp open ssl/vmware-auth VMware ESXi SOAP API 6.7.0
902/tcp open ssl/vmware-auth VMware Authentication Daemon 1.10 (Uses VNC, SOAP)
5988/tcp closed wbem-http
5989/tcp closed wbem-http
5989/tcp closed wbem-http
8000/tcp open http-alt?
8000/tcp open ssl/soap gSOAP 2.8
Service Info: Host: golsrvesx08.gold.local; CPE: cpe:/o:vmware:esxi, cpe:/o:vmware:ESXi:6.7.0
```



```
Not shown: 990 filtered ports
PORT STATE SERVICE
22/tcp closed ssh
80/tcp open http
                                                                                                                                                                VERSION
                                                                                                                                                                VMware ESXi Server httpd
80/tcp open http VMware ESX1 Server httpd
427/tcp open svrloc?
443/tcp open ssl/https VMware ESX1 SOAP API 7.0.1
902/tcp open ssl/vmware-auth VMware Authentication Daemon 1.10 (Uses VNC, SOAP)
5988/tcp open ssl/wbem http
5989/tcp open ssl/wbem SBLIM Small Footprint CIM Broker
8000/tcp open http.
8300/tcp open tmi?
 9080/tcp open ssl/soap gSOAP 2.8
Service Info: Host: GOLSRVESX10; CPE: cpe:/o:vmware:esxi, cpe:/o:vmware:ESXi:7.0.1
Nmap scan report for 172.16.53.60
Host is up (0.00067s latency).
Not shown: 989 closed ports
PORT STATE SERVICE
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open microsoft-ds
3389/tcp open ssl/ms-wbt-server?
8009/tcp open ajp13
8080/tcp open http
                                                                                                                                                                                 VERSION
                                                                                                                                                                              Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
                                                                                microsoft-ds
ssl/ms-wbt-server?
                                                                                                                                                                              Apache Jserv (Protocol v1.3)
Apache Tomcat/Coyote JSP engine 1.1
Microsoft Windows RPC
 8080/tcp open http Apache formedly elegates and apache formedly elegates a
Nmap scan report for 172.16.53.61
Host is up (0.00090s latency).
Not shown: 993 filtered ports
PORT STATE SERVICE
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open microsoft-ds
3389/tcp open ssl/ms-wbt-server?
8080/tcp open http
49154/tcp open msrpc
                                                                                                                                                                                 VERSION
                                                                                                                                                                                Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
                                                                                                                                                                                Apache Tomcat/Coyote JSP engine 1.1
Microsoft Windows RPC
Microsoft Windows RPC
 49154/tcp open msrpc Microsoft Windows RPC
49167/tcp open msrpc Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.53.62
Host is up (0.00081s latency).
Not shown: 993 filtered ports
PORT STATE SERVICE
PORT STATE SERVICE
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open microsoft-ds
                                                                                                                                                                               VERSION
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
445/tcp open microsoft-ds
3389/tcp open ssl/ms-wbt-server?
49153/tcp open msrpc
49164/tcp open msrpc
49160/tcp open msrpc
                                                                                                                                                                                Microsoft Windows RPC
Microsoft Windows RPC
Microsoft Windows RPC
```



```
root@AFROSAI-E-01
VERSION
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
                                                                                                                                                                                                                                   Microsoft Windows RPC
Microsoft Windows RPC
Microsoft Windows RPC
: Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
                       o scan report for 172.16.53.63
t is up (0.00099s latency).
shown: 993 filtered ports
for STATE SERVICE
for open msrpc
for open netbios-ssn
for open microsoft-ds
for open microsoft-ds
for open microsoft-ds
for open microsoft-ds
for open msrpc
for 
                       vice Info: OSs: Windows, Windows
o scan report for 172.16.53.64
t is up (0.00065s latency).
shown: 986 closed ports
for open http
for open msrpc
for open msrpc
for open sel/http
for open microsoft-ds
oftcp open msysql
for open sel/ms-wbt-server?
for open sel/ms-wbt-server?
for open http
for open http
for open http
for open http
for open msrpc
for open msrpc
for open msrpc
                                                                                                                                                                                                                                 VERSION
Apache httpd 2.4.38 ((Win64) OpenSSL/1.0.2q PMP/5.6.40)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Apache httpd 2.4.38 ((Win64) OpenSSL/1.0.2q PHP/5.6.40)
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
MariaDB (unauthorized)
                                                                                                                                                                                                                                 Apache Jserv (Protocol v1.3)
Apache Tomcat/Coyote JSP engine 1.1
Microsoft Windows RPC
S
 8989/Tcp open http A
49152/tcp open msrpc M
49153/tcp open msrpc M
49154/tcp open msrpc M
49155/tcp open msrpc M
49160/tcp open msrpc M
Service Info: OSs: Windows, Windows
     map scan report for 172.16.53.65
lost is up (0.00092s latency).
lot shown: 984 filtered ports
lost state service
lost open http
lost open http
lost open http
lost open msrpc
lost open netbios-ssn
lost open microsoft-ds
lost open microsoft-ds
                                                                                                                                                                                                                                         VERSION
Apache httpd 2.2.14 ((Win32) PHP/5.2.11 DAV/2)
Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
        433/tcp open ms-sql-s Microsoft SQL Server 2016 13.00.5026
```



```
File Edit View Search Terminal Help
Nmap scan report for 172.16.53.64
Host is up (0.00065s latency).
Not shown: 986 closed ports
PORT STATE SERVICE VERSION
80/tcp open http Apache httpd 2.4.38 ((Win64) OpenSSL/1.0.2q PHP/5.6.40
135/tcp open netbios-ssn Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows server 2008 R2 - 2012 microsoft-ds
443/tcp open ssl/http Apache httpd 2.4.38 ((Win64) OpenSSL/1.0.2q PHP/5.6.40
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
3380/tcp open mysql Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
3389/tcp open ssl/ms-wbt-server?
8009/tcp open http Apache Jserv (Protocol V1.3)
8080/tcp open http Apache Tomcat/Coyote JSP engine 1.1
49153/tcp open msrpc Microsoft Windows RPC
49153/tcp open msrpc Microsoft Windows RPC
49155/tcp open msrpc Microsoft Windows RPC
49156/tcp open msrpc Microsoft Windows RPC
49156/tcp open msrpc Microsoft Windows RPC
5ervice Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      root@AFROSAI-E-01: ~
                                                                                                                                                                                                                                                    VERSION
Apache httpd 2.4.38 ((Win64) OpenSSL/1.0.2q PHP/5.6.40)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Apache httpd 2.4.38 ((Win64) OpenSSL/1.0.2q PHP/5.6.40)
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
MariaDB (unauthorized)
     Nmap scan report for 172.16.53.65
Host is up (0.00092s latency).
Not shown: 984 filtered ports
PORT STATE SERVICE
80/tcp open http
84/tcp open http
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open microsoft-ds
                                                                                                                                                                                                                                                            VERSION
Apache httpd 2.2.14 ((Win32) PHP/5.2.11 DAV/2)
Microsoft HTTPAPI httpd 2.0 (SSDP/UPNP)
Microsoft Windows RPC
Microsoft Windows Retbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
                                                                                                                                                                                                                                                            Microsoft SQL Server 2016 13.00.5026
       1433/tcp open ms-sql-s
     1433/tcp open ms-sql-s Microsoft SQL Server 2010 13.00.5020
3389/tcp open ajp13 Apache Jserv (Protocol v1.3)
8080/tcp open http Apache Tomcat/Coyote JSP engine 1.1
8080/tcp open ssl/sun-answerbook?
49152/tcp open msrpc Microsoft Windows RPC
49153/tcp open msrpc Microsoft Windows RPC
49154/tcp open msrpc Microsoft Windows RPC
49155/tcp open msrpc Microsoft Windows RPC
49156/tcp open msrpc Microsoft Windows RPC
80156/tcp open msrpc Microsoft Windows RPC
80256/tcp open msrpc Microsoft Windows RPC
8036/tcp open msrpc Microsoft Wi
     Nmap scan report for 172.16.53.66
Host is up (0.00066s latency).
Not shown: 989 closed ports
PORT STATE SERVICE
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open sicrosoft us
                                                                                                                                                                                                                                                    VERSION
Microsoft Windows RPC
Microsoft Windows netbios-ssn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             microsoft-ds
          433/tcp open ms-sql-s Microsoft SQL Server 2012 11.00.3000; SP1
      2383/tcp open ms viapin
3389/tcp open sst/ms-wbt-server?
49152/tcp open msrpc
49154/tcp open msrpc
                                                                                                                                                                                                                                                     Microsoft Windows RPC
Microsoft Windows RPC
Microsoft Windows RPC
```



```
root@AFROSAI-E-01:
                   Edit View Search Terminal Help
8080/tcp open http Apache Tomcat/Coyote JSP engine 1.1
49152/tcp open msrpc Microsoft Windows RPC
49153/tcp open msrpc Microsoft Windows RPC
49154/tcp open msrpc Microsoft Windows RPC
49155/tcp open msrpc Microsoft Windows RPC
49160/tcp open msrpc Microsoft Windows RPC
49160/tcp open msrpc Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.53.65
Host is up (0.00092s latency).
Not shown: 984 filtered ports
PORT STATE SERVICE
80/tcp open http
84/tcp open http
135/tcp open msrpc
139/tcp open metbios-ssn
445/tcp open microsoft-ds
                                                                                                                                  VERSION
Apache httpd 2.2.14 ((Win32) PHP/5.2.11 DAV/2)
Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
                                                                                                                                  Microsoft SQL Server 2016 13.00.5026
 1433/tcp open ms-sql-s
1433/tcp open ms-sql-s Microsoft SQL Server 2016 13.00.5026
3389/tcp open ajpl3 Apache Jserv (Protocol v1.3)
8080/tcp open http Apache Tomcat/Coyote JSP engine 1.1
8888/tcp open ssl/sun-answerbook?
49153/tcp open msrpc Microsoft Windows RPC
49153/tcp open msrpc Microsoft Windows RPC
49154/tcp open msrpc Microsoft Windows RPC
49155/tcp open msrpc Microsoft Windows RPC
49156/tcp open msrpc Microsoft Windows RPC
49156/tcp open msrpc Microsoft Windows RPC
5ervice Info: OSS: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.53.66
Host is up (0.00066s latency).
Not shown: 989 closed ports
PORT STATE SERVICE
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open nicross
                                                                                                                              VERSION
Microsoft Windows RPC
Microsoft Windows netbios-ssn
                                                                                                                                                                                                                                                                 2012 microsoft-ds
                                                                                                                      Microsoft SQL Server 2012 11.00.3000; SP1
 1433/tcp open ms-sql-s
1433/tcp open ms/sqt 2333/tcp open ms/sqt 2333/tcp open ssl/ms-wbt-server?
49152/tcp open ms/rc Microsoft Windows RPC
49153/tcp open ms/rc Microsoft Windows RPC
49154/tcp open ms/rc Microsoft Windows RPC
49155/tcp open ms/rc Microsoft Windows RPC
49157/tcp open ms/rc Microsoft Windows RPC
49157/tcp open ms/rc Microsoft Windows RPC
49157/tcp open ms/rc Microsoft Windows RPC
Service Info: OSS: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.53.67
Host is up (0.00064s latency).
Not shown: 989 closed ports
PORT STATE SERVICE
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open microsoft-ds
3389/tcp open ssl/ms-wbt-server?
                                                                                                                              VERSION
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
```



```
File Edit View Search Terminal Help
                       STATE SERVICE
                                                                                VERSION
Microsoft Windows RPC
 PORT
135/tcp
                      open msrpc
 139/tcp
445/tcp
                                   netbios-ssn
microsoft-ds
                                                                                Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
                       open
                     open
 3389/tcp open
8089/tcp open
8080/tcp open
                                     ssl/ms-wbt-server?
3389/tcp open ssl/ms-wbt-server?
8009/tcp open ajp13 Apache Jserv (Protocol v1.3)
80808/tcp open http Apache Tomcat/Coyote JSP engine 1.1
49152/tcp open msrpc Microsoft Windows RPC
49153/tcp open msrpc Microsoft Windows RPC
49154/tcp open msrpc Microsoft Windows RPC
49155/tcp open msrpc Microsoft Windows RPC
49159/tcp open msrpc Microsoft Windows RPC
49159/tcp open msrpc Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.53.68
Host is up (0.00098s latency).
Not shown: 994 filtered ports
PORT STATE SERVICE VERSION
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn
445/tcp open microsoft-ds Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
3389/tcp open ssl/ms-wbt-server?
49154/tcp open msrpc Microsoft Windows RPC
49156/tcp open msrpc Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.53.70
Host is up (0.00093s latency).
Not shown: 992 filtered ports
PORT STATE SERVICE
80/tcp open http
                                                                                VERSION
                    open msrpc
open netbios-ssn
open ssl/http
 135/tcp
139/tcp
                                                                               Microsoft Windows RPC
Microsoft Windows netbios-ssn
 443/tcp
445/tcp
                                   ssl/http
microsoft-ds
                                                                               nginx
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
                     open
Nmap scan report for 172.16.53.85
Host is up (0.00085s latency).
Not shown: 993 filtered ports
PORT STATE SERVICE VERS!
80/tcp open http Micro
135/tcp open msrpc Micro
139/tcp open netbios-ssn Micro
45/tcp open microsoft.de Micro
                                                                  VERSION
 80/tcp open http Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn
445/tcp open microsoft-ds Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
 1433/tcp open ms-sql-s Microsoft SQL Server 2016 13.00.5026
 Nmap scan report for 172.16.53.91
```



```
File Edit View Search Terminal Help
PORT STATE SERVICE
80/tcp open http
135/tcp open msrpc
139/tcp open netbios-ssn
                                                                               VERSION
Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
 Hicrosoft HTTPAPI httpd 2.0 (SSDP/UPnP)
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn
445/tcp open microsoft-ds Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
  1433/tcp open ms-sql-s Microsoft SQL Server 2016 13.00.5026
   ervice Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
 Nmap scan report for 172.16.53.91
Host is up (0.0010s latency).
Not shown: 996 filtered ports
PORT STATE SERVICE VERSION
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn
445/tcp open microsoft-ds?
3389/tcp open ms-wbt-server Microsoft Terminal Services
   ervice Info: OS: Windows; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.53.92
Host is up (0.0010s latency).
Not shown: 991 filtered ports
PORT STATE SERVICE VERSION
80/tcp open http Microsoft IIS httpd 10.0
135/tcp open msrpc Microsoft Windows RPC
139/tcp open microsoft-ds?
1801/tcp open microsoft-ds?
1801/tcp open msrpc Microsoft Windows RPC
2103/tcp open msrpc Microsoft Windows RPC
2105/tcp open msrpc Microsoft Windows RPC
2107/tcp open msrpc Microsoft Windows RPC
3389/tcp open msrpc Microsoft Windows RPC
3389/tcp open msrpc Microsoft Windows RPC
Service Info: 05: Windows; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.53.95
Host is up (0.0011s latency).
Not shown: 991 filtered ports
PORT STATE SERVICE VERS.
80/tcp open http Micro
135/tcp open msrpc Micro
139/tcp open netbios-ssn Micro
445/tcp open microsoft-ds?
1801/tcp open msmq?
2103/tcp open msrpc Micro
                                                                       VERSION
Microsoft IIS httpd 10.0
Microsoft Windows RPC
n Microsoft Windows netbios-ssn
  1801/tcp open msmq?
2103/tcp open msrpc
 2103/tcp open msrpc Microsoft Windows RPC
2105/tcp open msrpc Microsoft Windows RPC
2107/tcp open msrpc Microsoft Windows RPC
3389/tcp open ms-wbt-server Microsoft Terminal Services
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows
                                                                               Microsoft Windows RPC
 Read data files from: /usr/bin/../share/nmap
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 256 IP addresses (41 hosts up) scanned in 425.29 seconds
Raw packets sent: 66852 (2.930MB) | Rcvd: 17524 (702.526KB)
root@AFROSAI-E-01:-#
    Nmap scan report for 172.16.52.1
Host is up (0.0054s latency).
    Not shown: 998 closed ports
PORT STATE SERVICE VERSION
22/tcp open ssh Cisco SSH 1.25 (pro:
443/tcp open ssl/https?
Service Info: OS: IOS; CPE: cpe:/o:cisco:ios
                                                                      Cisco SSH 1.25 (protocol 2.0)
    Nmap scan report for 172.16.52.2
Host is up (0.0035s latency).
Not shown: 997 closed ports
PORT STATE SERVICE VERSION
    22/tcp open ssh
80/tcp open http
                                                                      OpenSSH 3.7.1p2 (protocol 2.0)
eHTTP 2.0 (HP ProCurve Switch 2810-246 http config)
     443/tcp open ssl/https?
Service Info: Host: DC-5W2; CPE: cpe:/h:hp:procurve_switch_2818-24g, cpe:/o:hp:procurve_switch_software
```



```
File Edit View Search Terminal Help
File Edit View Search Terminal Help
Nmap scan report for 172.16.52.2
Host is up (0.0035s latency).
Not shown: 997 closed ports
PORT STATE SERVICE VERSION
22/tcp open ssh OpenSSH 3.7.1p2 (protocol 2.0)
80/tcp open http eHTTP 2.0 (HP ProCurve Switch 2810-246 http config)
443/tcp open sst/https?
Service Info: Host: DC-SW2; CPE: cpe:/h:hp:procurve_switch_2810-24g, cpe:/o:hp:procurve_switch_software
  Nmap scan report for 172.16.52.4
Host is up (0.0034s latency).
Not shown: 996 filtered ports
PORT STATE SERVICE VERSION
22/tcp open ssh OpenSSH 4.3 (protocol 2.0)
80/tcp open http Citrix Xen Simple HTTP Serv
443/tcp open ssl/https?
                                                                Citrix Xen Simple HTTP Server (XenServer 6.2.0)
631/tcp closed ipp
Nmap scan report for 172.16.52.6
Host is up (0.0055s latency).
Not shown: 986 closed ports
PORT STATE SERVICE
80/tcp open http
                                                                                     VERSION

Apache httpd 2.2.14 ((Win32) PHP/5.2.11 DAV/2)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
Java RMI
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open microsoft-d:
1099/tcp open java-rmi
                                        microsoft-ds
                                       ssl/ms-wbt-server?
ajpl3
http
ssl/http
3389/tcp open
8009/tcp open
                                                                                     Apache Jserv (Protocol v1.3)
                                                                                      Apache Tomcat/Coyote JSP engine 1.1
Apache Tomcat/Coyote JSP engine 1.1
8080/tcp open
8888/tcp open
49152/tcp open
49153/tcp open
                                                                                      Microsoft Windows RPC
Microsoft Windows RPC
                                        msrpc
49153/tcp open msrpc Microsoft Windows RPC
49155/tcp open msrpc Microsoft Windows RPC
49167/tcp open msrpc Microsoft Windows RPC
49167/tcp open msrpc Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.52.8
Host is up (0.0049s latency).
Not shown: 991 closed ports
PORT STATE SERVICE VERSION
PORT STATE SERVICE VERSION
21/tcp open ftp vsftpd 2.0.8 or later
22/tcp open ssh OpenSSH 5.6 (protocol 2.0)
80/tcp open http lighttpd 1.4.28
139/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
443/tcp open ssl/https?
445/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKOROUP)
548/tcp open afp Netatalk 2.2.3 (name: NASO1; protocol 3.3)
3689/tcp open daap mt-daapd DAAP 0.2.4.2
9000/tcp open upnp TwonkyMedia UPnP (UPnP 1.0; pvConnect SDK 1.0; Twonky SDK 1.1)
Service Info: Host: Welcome; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel:2
Nmap scan report for 172.16.52.11
Host is up (0.0021s latency).
```



```
root@AFROSAI-E-01: -
    File Edit View Search Terminal Help
 Nmap scan report for 172.16.52.8
Host is up (0.0049s latency).
Not shown: 991 closed ports
PORT STATE SERVICE VERSI
                                                                                          VERSION
 PORT STATE SERVI
21/tcp open ftp
22/tcp open ssh
80/tcp open http
139/tcp open netbi
                                                 SERVICE VERSION
ftp vsftpd 2.0.8 or later
ssh OpenSSH 5.6 (protocol 2.0)
http lighttpd 1.4.28
netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
                                                   ssl/https?
 445/tcp open sst/nttps/
445/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
548/tcp open afp Netatalk 2.2.3 (name: NAS01; protocol 3.3)
3689/tcp open daap mt-daapd DAAP 0.2.4.2
9000/tcp open upnp TwonkyMedia UPnP (UPnP 1.0; pvConnect SDK 1.0; Twonky SDK 1.1)
Service Info: Host: Welcome; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel:2
Nmap scan report for 172.16.52.11
Host is up (0.0021s latency).
Not shown: 990 closed ports
PORT STATE SERVICE VERSION
80/tcp open http Apache httpd
111/tcp open retbios-ssn Samba smbd 3.X - 4.X
(workgroup: WORKGROUP)
443/tcp open netbios-ssn Samba smbd 3.X - 4.X
(workgroup: WORKGROUP)
548/tcp open netbios-ssn Samba smbd 3.X - 4.X
(workgroup: WORKGROUP)
548/tcp open netbios-ssn Samba smbd 3.X - 4.X
(workgroup: WORKGROUP)
548/tcp open nfs acl 2-3 (RPC #100227)
3396/tcp open mysql MySOL (unauthorized)
8181/tcp open http Plex Media Server (WD MyCloud)
49154/tcp open upnp Portable SDK for UPNP devices 1.6.25 (Linux 3.10.39; UPNP 1.0)
Service Info: Host: WDMYCLOUD; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel:3.10.39
Nmap scan report for 172.16.52.12
Host is up (0.0057s latency).
Not shown: 994 closed ports
PORT STATE SERVICE (22/tcp open ssh (2301/tcp open http (2381/tcp open ssl/compaq-https? 3268/tcp open ssl/compaq-https?
                                                                                                               VERSION
OpenSSH 4.3 (protocol 2.0)
CompaqHTTPServer 9.9 (HP System Management)
 2381/tcp open 55:/compay.nttps.
3260/tcp open iscsi?
5988/tcp open http Web-Based Enterprise Mc
5989/tcp open ssl/wbem-https?
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
                                                                                                                Web-Based Enterprise Management CIM serverOpenPegasus WBEM httpd
Nmap scan report for golsrvnas02.gold.local (172.16.52.13)
Host is up (0.0017s latency).
Not shown: 990 closed ports
PORT STATE SERVICE VERSION
80/tcp open http lighttpd 1.4.39
111/tcp open rpcbind 2-4 (RPC #100000)
139/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup
                                                    http lighttpd 1.4.39
rpcbind 2-4 (RPC #100000)
netbios-ssn Samba smbd 3.X - 4.X (workgroup: GOLD)
  139/tcp
443/tcp
                                                     ssl/https?
                                  open
  445/tcp
873/tcp
                                  open netbios-ssn Samba smbd 3.X - 4.X (workgroup: GOLD)
open rsync (protocol version 31)
open nfs_acl 2-3 (RPC #100227)
                                  open rsync
open nfs_acl
open dxspider?
```



```
cations * Places * 🖸 Terminal *
                                                                                                                                                                                                                                                                        root@AFROSAI-E-01: ~
Nmap scan report for 172.16.52.15
Host is up (0.0039s latency),
Not shown: 990 filtered ports
PORT STATE SERVICE VERSI
22/tcp open ssh Opens
80/tcp open http Apach
139/tcp closed netbios-ssn
445/tcp closed incrosoft-ds
5666/tcp open tcpwrapped
5901/tcp closed vnc-1
5902/tcp closed vnc-1
5902/tcp closed vnc-3
5904/tcp closed unknown
8080/tcp closed http-proxy
                                                                        VERSION
OpenSSH 6.4 (protocol 2.0)
Apache httpd 2.4.6 ((CentOS) PHP/5.4.16)
Nmap scan report for 172.16.52.17
Host is up (0.0053s latency).
Not shown: 994 closed ports
PORT STATE SERVICE VERSION
22/tcp open ssh OpenSSH 4.3 (protocol; 2301/tcp open http CompaqHTTPServer 9.9 (12381/tcp open ssl/compaq-https?
3260/tcp open iscs1?
5988/tcp open http Web-Based Enterprise May 5989/tcp open ssl/wbem-https?
Service Info: 05: Linux; CPE: cpe:/o:linux:linux_kernel
                                                                                           VERSION
OpenSSH 4.3 (protocol 2.0)
CompaqHTTPServer 9.9 (HP System Management)
                                                                                          Web-Based Enterprise Management CIM serverOpenPegasus WBEM httpd
Nmap scan report for 172.16.52.18
Host is up (0.0044s latency).
Not shown: 995 closed ports
PORT STATE SERVICE VERSION
22/tcp open ssh OpenSSH OA (protocol 2.0)
23/tcp open telnet HP BladeSystem Onboard Administrator telnetd (FW 4.40)
80/tcp open http Apache httpd
161/tcp filtered snmp
443/tcp open ssl/https?
Service Info: Host: OA-7446A0F89149; Device: remote management
 Nmap scan report for 172.16.52.19
Host is up (0.0050s latency).
```



```
Nmap scan report for 172.16.52.17
Host is up (0.0053s latency).
Not shown: 994 closed ports
PORT STATE SERVICE
22/tcp open ssh
2301/tcp open http
2381/tcp open ssl/compaq-https?
                                                                                                                                                  VERSION
                                                                                                                                                  OpenSSH 4.3 (protocol 2.0)
CompaqHTTPServer 9.9 (HP System Management)
 3260/tcp open iscsi?
5988/tcp open http Web-Based Enterprise M
5989/tcp open ssl/wbem-https?
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
                                                                                                                                                 Web-Based Enterprise Management CIM serverOpenPegasus WBEM httpd
 Nmap scan report for 172.16.52.18
Host is up (0.0044s latency).
Not shown: 995 closed ports
PORT STATE SERVICE
22/tcp open ssh
23/tcp open telnet
80/tcp open http
161/tcp filtered smmp
                                                                                                                        OpenSSH OA (protocol 2.0)
HP BladeSystem Onboard Administrator telnetd (FW 4.40)
                                                                                                                            Apache httpd
 443/tcp open ssl/https?
Service Info: Host: OA-7446A0F89149; Device: remote management
Nmap scan report for 172.16.52.19
Host is up (0.0050s latency).
Not shown: 994 closed ports
PORT STATE SERVICE V
22/tcp open ssh C
2301/tcp open http
2381/tcp open ssl/compaq-https?
                                                                                                                                                  VERSION
                                                                                                                                                 OpenSSH 4.3 (protocol 2.0)
CompaqHTTPServer 9.9 (HP System Management 3.0.1.73; httpd 2.2.6+)
 3260/tcp open iscsi?
5988/tcp open http Web-Based Enterprise M
5989/tcp open ssl/wbem-https?
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
                                                                                                                                                  Web-Based Enterprise Management CIM serverOpenPegasus WBEM httpd
Nmap scan report for 172.16.52.20
Host is up (0.0055s latency).
Not shown: 991 closed ports
PORT STATE SERVICE VERSIO
                                                                                                                       VERSION
 PORT STATE SERVICE VERSION

80/tcp open http Apache httpd

111/tcp open rpcbind 2-4 (RPC #100000)

139/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

443/tcp open ssl/http Apache httpd

445/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open nfs Apache httpd

149/tcp open nfs Apache httpd

159/tcp open nfs Apache httpd

169/tcp open nfs Apache httpd

179/tcp open nfs Apache httpd

189/tcp open nfs Apac
Nmap scan report for 172.16.52.21
Host is up (0.0054s latency).
Not shown: 994 closed ports
PORT STATE SERVICE
22/tcp open ssh
                                                                                                                                                  VERSION
                                                                                                                                                  OpenSSH 4.3 (protocol 2.0)
```



```
cations - Places - 🖸 Terminal -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mon 13:25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      root@AFROSAI-E-01: ~
File Edit View Search Terminal Help*

Nnap scan report for 172.16.52.20
Host is up (0.0955s latency).

Not shown: 991 closed ports

PORT STATE SERVICE VERSION

80/tcp open http Apache httpd

111/tcp open rpcbind 2-4 (RPC #100000)

139/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

443/tcp open ssl/http Apache httpd

445/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open netbios-ssn Samba smbd 3.X - 4.X (work
  Nmap scan report for 172.16.52.21
Host is up (0.0054s latency).
Not shown: 994 closed ports
PORT STATE SERVICE
22/tcp open ssh (0.2017/cp open http)
                                                                                                                                                                                    VERSION
OpenSSH 4.3 (protocol 2.0)
CompaqHTTPServer 9.9 (HP System Management 3.0.1.73; httpd 2.2.6+)
   2381/tcp open http compaq+11PServer 9.9 (1
2381/tcp open sst/compaq-https?
3260/tcp open iscsi?
5988/tcp open http Web-Based Enterprise Ma
5989/tcp open sst/wbem-https?
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
                                                                                                                                                                                   Web-Based Enterprise Management CIM serverOpenPegasus WBEM httpd
  Nmap scan report for 172.16.52.24
Host is up (0.0053s latency).
Not shown: 984 closed ports
PORT STATE SERVICE
111/tcp open rpcbind
135/tcp open msrpc
139/tcp open metbios-ssn
445/tcp open microsoft-ds
1058/tcp open rpcbind
2049/tcp open rpcbind
2049/tcp open http
                                                                                                                                                                                                         VERSTON
                                                                                                                                                                                                         Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
    2849/tcp open rpcoind
2381/tcp open http
2381/tcp open ssl/compaq-https?
2500/tcp open rtsserv?
3260/tcp open tcpwrapped
3389/tcp open ssl/ms-wbt-server?
5989/tcp open ssl/wbem-https?
9876/tcp open sd?
                                                                                                                                                                                                         HP System Management Homepage 6.2.0.13 (CompagHTTPServer 9.9)
     19691/tcp open msexchange-logcopier Microsoft Exchange 2010 log copier
10002/tcp open msexchange-logcopier Microsoft Exchange 2010 log copier
10003/tcp open storagecraft-image StorageCraft Image Manager
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
 Nmap scan report for 172.16.52.25
Host is up (0.0039s latency).
Not shown: 998 closed ports
PORT STATE SERVICE VERSION
80/tcp open http Arris TG862G http config
443/tcp open ssl/http Arris TG862G http config
```



```
root@AFROSAI-E-01: ~
File Edit View Search Terminal Help

Nmap scan report for 172.16.52.20

Host is up (8.0055s latency).

Not shown: 991 closed ports

PORT STATE SERVICE VERSION

80/tcp open http Apache httpd

111/tcp open recbind 2-4 (RPC #100000)

139/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

443/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

443/tcp open netbios-ssn Samba smbd 3.X - 4.X (workgroup: FREEBALANCE)

548/tcp open afp Netatalk 3.0.8 (name: FBBACKUP02; protocol 3.3)

2049/tcp open nfs_acl 2-3 (RPC #100227)

8181/tcp open http Plex Media Server (WD MyCloud)

49152/tcp open upnp Portable SDK for UPnP devices 1.6.6 (Linux 3.2.26; UPnP 1.0)

Service Info: Host: FBBACKUP02; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel:3.2.26
    File Edit View Search Terminal Help
Nmap scan report for 172.16.52.21
Host is up (0.0054s latency).
Not shown: 994 closed ports
PORT STATE SERVICE
22/tcp open ssh (0.2301/tcp open http
                                                                                                            OpenSSH 4.3 (protocol 2.0)
CompaqHTTPServer 9.9 (HP System Management 3.0.1.73; httpd 2.2.6+)
 2381/tcp open nttp CompaqHTTPServer 9.9 (1
2381/tcp open ssl/compaq-https?
3260/tcp open iscs1?
5988/tcp open http Web-Based Enterprise Ma
5989/tcp open ssl/wbem-https?
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
                                                                                                          Web-Based Enterprise Management CIM serverOpenPegasus WBEM httpd
Nmap scan report for 172.16.52.24
Host is up (0.0053s latency).
Not shown: 984 closed ports
PORT STATE SERVICE
111/tcp open rpcbind
135/tcp open msrpc
139/tcp open metbios-ssn
445/tcp open microsoft-ds
1058/tcp open rpcbind
2049/tcp open rpcbind
2049/tcp open http
                                                                                                                        VERSION
                                                                                                                        Microsoft Windows RPC
                                                                                                                       Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
 2301/tcp open
2381/tcp open
                                                   http
ssl/compaq-https?
                                                                                                                        HP System Management Homepage 6.2.0.13 (CompagHTTPServer 9.9)
 2500/tcp open
3260/tcp open
                                                   rtsserv?
tcpwrapped
                                                    ssl/ms-wbt-server?
ssl/wbem-https?
 3389/tcp open
5989/tcp open
 3993/tcp open sd?
10001/tcp open sd?
10001/tcp open msexchange-logcopier Microsoft Exchange 2010 log copier
10002/tcp open msexchange-logcopier Microsoft Exchange 2010 log copier
10003/tcp open storagecraft-image StorageCraft Image Manager
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
 Nmap scan report for 172.16.52.25
Host is up (0.0039s latency).
Not shown: 998 closed ports
PORT STATE SERVICE VERSION
80/tcp open http Arris TG862G http config
443/tcp open ssl/http Arris TG862G http config
```



```
### Places | Deminal | Proceign |
```



```
cations * Places * Terminal *
                                                                                                                                                                                                                                                           root@AFROSAI-E-01: -
              Edit View Search Terminal Help
Nmap scan report for 172.16.52.38
Host is up (0.0039s latency).
Not shown: 986 filtered ports
PORT STATE SERVICE
80/tcp open http
135/tcp open msrpc
139/tcp open metbios-ssn
445/tcp open microsoft-ds
                                                                                           VERSION
Apache httpd 2.2.14 ((Win32) PHP/5.2.11 DAV/2)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
                                                                                            Microsoft SQL Server 2012 11.00.3128; SP1+
1433/tcp open ms-sql-s
3099/tcp open ajpl3 Apache Jserv (Protocol vl.3)
8089/tcp open ajpl3 Apache Tomcat/Coyote JSP engine 1.1
8888/tcp open ssl/http Apache Tomcat/Coyote JSP engine 1.1
49154/tcp open msrpc Microsoft Windows RPC
49155/tcp open msrpc Microsoft Windows RPC
49157/tcp open msrpc Microsoft Windows RPC
49161/tcp open msrpc Microsoft Windows RPC
49161/tcp open msrpc Microsoft Windows RPC
5ervice Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for golsrvdc02.gold.local (172.16.52.40)
Host is up (0.0043s latency).
Not shown: 983 filtered ports
PORT STATE SERVICE VERSION
53/tcp open domain Hicrosoft DNS 6.1.7601
88/tcp open kerberos-sec Hicrosoft Windows Kerbe
135/tcp open nsrpc Hicrosoft Windows RPC
139/tcp open netbios-ssn Hicrosoft Windows Activ
389/tcp open ldap Hicrosoft Windows Activ
445/tcp open kpasswd57
593/tcp open ncacn http Microsoft Windows RPC c
                                                                                           VERSION
Microsoft DNS 6.1.7601 (1DB15F75) (Windows Server 2008 R2 SP1)
Microsoft Windows Kerberos (server time: 2021-02-08 12:44:14Z)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Active Directory LDAP (Domain: GOLD.LOCAL, Site: Default-First-Site-Name)
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds (workgroup: GOLD)
 464/tcp open kpasswd5/
593/tcp open ncacn http
636/tcp open tcpwrapped
3268/tcp open ldap
3269/tcp open tcpwrapped
3389/tcp open ssl/ms-wbt-server?
5666/tcp open tcpwrapped
                                                                                           Microsoft Windows RPC over HTTP 1.0
                                                                                            Microsoft Windows Active Directory LDAP (Domain: GOLD.LOCAL, Site: Default-First-Site-Name)
 49154/tcp open msrpc
49155/tcp open msrpc
49156/tcp open msrpc
                                                                                            Microsoft Windows RPC
Microsoft Windows RPC
Microsoft Windows RPC
 49159/tcp open ncacn http Microsoft Windows RPC over HTTP 1.0
Service Info: Host: GOLSRVDC02; OS: Windows; CPE: cpe:/o:microsoft:windows server 2008:r2:sp1, cpe:/o:microsoft:windows
Nmap scan report for 172.16.52.42
Host is up (0.0031s latency).
Not shown: 995 filtered ports
PORT STATE SERVICE VERSION
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn
445/tcp open netbios-ssn
 1433/tcp open ms-sql-s Microsoft SQL Server 2012 11.00.3128; SP1+
 3389/tcp open sat/marmut server.
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.52.49
```



```
ations ▼ Places ▼ 🖪 Terminal ▼
                                                                                                                                                                                                                                       Mon 13:32
                                                                                                                                                                                                                            root@AFROSAI-E-01: ~
 636/tcp open tcpwrapped
3268/tcp open ldap
                                                                                 Microsoft Windows Active Directory LDAP (Domain: GOLD.LOCAL, Site: Default-First-Site-Name)
3269/tcp open tcpwrapped
3389/tcp open ssl/ms-wbt-server?
5666/tcp open tcpwrapped
49154/tcp open msrpc
49155/tcp open msrpc
                                                                                Microsoft Windows RPC
Microsoft Windows RPC
Microsoft Windows RPC
Microsoft Windows RPC over HTTP 1.0
 49159/tcp open msrpc Microsoft Windows RPC
49159/tcp open ncacn_http Microsoft Windows RPC over HTTP 1.0
Service Info: Host: GOLSRVDC02; OS: Windows; CPE: cpe:/o:microsoft:windows_server_2008:r2:sp1, cpe:/o:microsoft:windows
Nmap scan report for 172.16.52.42
Host is up (0.0031s latency).
Not shown: 995 filtered ports
PORT STATE SERVICE
135/tcp open msrpc
                                                                              VERSION
Microsoft Windows RPC
139/tcp open netbios-ssn
                                                                              Microsoft Windows netbios-ssn
1433/tcp open ms-sql-s Microsoft SQL Server 2012 11.00.3128; SP1+
 3389/tcp upon 33,751 this common Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.52.49
Host is up (0.0036s latency).
Not shown: 991 filtered ports
PORT STATE SERVICE VERSION
B0/tcp open http Microsoft IIS httpd 10.0
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn
443/tcp open microsoft-ds?
902/tcp open ssl/vmare-auth VMware Workstation SOAP API 15.0.1
445/tcp open ssl/vmare-auth VMware Authentication Daemon 1.10 (Uses VNC, SOAP)
912/tcp open ssl/vmare-auth VMware Authentication Daemon 1.0 (Uses VNC, SOAP)
3389/tcp open ms-wbt-server Microsoft Terminal Services
5357/tcp open http Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows, cpe:/o:vmware:Workstation:15.0.1
Nmap scan report for 172.16.52.52
Host is up (0.0035s latency).
Not shown: 992 filtered ports
PORT STATE SERVICE
80/tcp open http
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp
                                                                                  VERSION
                                                                                 Microsoft IIS httpd 8.0
Microsoft Windows RPC
                                                                                 Microsoft Windows netbios-ssn
 1433/tcp open ms-sql-s
                                                                                 Microsoft SQL Server 2012 11.00.2100; RTM
3389/tcp open ms-Sqt-s REFOSOR SQL Server 2012 11.00.2100; RIN

5666/tcp open tcpwrapped

49154/tcp open msrpc Microsoft Windows RPC

Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Nmap scan report for 172.16.52.56
Host is up (0.0033s latency).
Not shown: 994 filtered ports
PORT STATE SERVICE
                                                                               VERSION
```



```
ations ▼ Places ▼ 🖸 Terminal ▼
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mon 13:34
                                                                                                                                                                                                                                                                                                                                                                                                                                root@AFROSAI-E-01: ~
 Nmap scan report for 172.16.52.38
Host is up (0.0039s latency).
Not shown: 986 filtered ports
PORT STATE SERVICE
80/tcp open http
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open microsoft-ds
1099/tcp open microsoft-ds
                                                                                                                                                        VERSION
Apache httpd 2.2.14 ((Win32) PHP/5.2.11 DAV/2)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
  1433/tcp open ms-sql-s
                                                                                                                                                        Microsoft SQL Server 2012 11.00.3128; SP1+
  1933/tcp open ms-sqt-s
3389/tcp open ajp13
8089/tcp open http
8888/tcp open ssl/http
49154/tcp open msrpc
49157/tcp open msrpc
49157/tcp open msrpc
 3389/tcp open ajp13 Apache Jserv (Protocol v1.3)
8888/tcp open http Apache Tomcat/Coyote JSP engine 1.1
8888/tcp open ssl/http Apache Tomcat/Coyote JSP engine 1.1
49155/tcp open msrpc Microsoft Windows RPC
49155/tcp open msrpc Microsoft Windows RPC
49151/tcp open msrpc Microsoft Windows RPC
49161/tcp open msrpc Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Service Info: OSS: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows

Nmap scan report for golsrvdc02.gold.local (172.16.52.40)

Host is up (0.0043s latency).

Not shown: 903 filtered ports

PORT STATE SERVICE VERSION

53/tcp open domain Microsoft DNS 6.1.7601 (1DB15F75) (Windows Server 2008 R2 SP1)

88/tcp open msrpc Microsoft Windows Kerberos (server time: 2021-02-08 12:44:142)

139/tcp open msrpc Microsoft Windows RPC

139/tcp open ldap Microsoft Windows Active Directory LDAP (Domain: GOLD.LOCAL, Site: Default-First-Site Microsoft Windows Server 2008 R2 - 2012 microsoft-ds (workgroup: GOLD)

445/tcp open microsoft-ds Microsoft Windows Server 2008 R2 - 2012 microsoft-ds (workgroup: GOLD)

455/tcp open macan_http Microsoft Windows RPC over HTTP 1.0

5268/tcp open tcpwrapped JASP JAMPS JAMPS
                                                                                                                                                      VERSION
Microsoft DNS 6.1.7601 (1DB15F75) (Windows Server 2008 R2 SP1)
Microsoft Windows Kerberos (server time: 2021-02-08 12:44:142)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Active Directory LDAP (Domain: GOLD.LOCAL, Site: Default-First-Site-Name)
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds (workgroup: GOLD)
                                                                                                                                                      Microsoft Windows Active Directory LDAP (Domain: GOLD.LOCAL, Site: Default-First-Site-Name)
Nmap scan report for 172.16.52.42
Host is up (0.0031s latency).
Not shown: 995 filtered ports
PORT STATE SERVICE
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open netbios-ssn
                                                                                                                                                      VERSION
                                                                                                                                              Microsoft Windows RPC
Microsoft Windows netbios-ssn
 1433/tcp open ms-sql-s Hicrosoft SQL Server 2012 11.00.3128; SP1+
 Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
       map scan report for 172.16.52.49
```



```
root@AFROSAI-E-01:
                      Edit View Search Terminal Help
         Nmap scan report for 172.16.52.42
Host is up (0.0031s latency).
Not shown: 995 filtered ports
PORT STATE SERVICE
                                                                                            VERSION
                                                                                           VERSION
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows netbios-ssn
          135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp spen microsoft-ds
           445/fro spen microsoft-ds
1433/fcp open ms-sql-s
3389/cp open ssl/ms.pht.server?
                                                                                           Microsoft Windows Server 2000 ni 2012 mi
Microsoft SQL Server 2012 11.00.3128; SP1+
          3389/ccp upon col/mc.wbt.server?
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
        Nmap scan report for 172.16.52.49
Host is up (0.0036s latency).
Not shown: 991 filtered ports
PORT STATE SERVICE VERSION
80/tcp open http Microsoft IIS httpd 10.0
135/tcp open msrpc Microsoft Windows RPC
139/tcp open netbios-ssn Microsoft Windows netbios-ssn
443/tcp open ssl/https Whware Workstation SOAP API 15.0.1
445/tcp open microsoft-ds?
902/tcp open microsoft-ds?
902/tcp open ms-wbt-server Microsoft Terminal Services
3389/tcp open ms-wbt-server Microsoft Terminal Services
Service Info: 0S: Windows; CPE: cpe:/o:microsoft:windows, cpe:/o:vmware:Workstation:15.0.1
        Nmap scan report for 172.16.52.52
Host is up (0.0035s latency).
Not shown: 992 filtered ports
PORT STATE SERVICE
80/tcp open http
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open macrosoft-ds
                                                                                              Microsoft IIS httpd 8.0
                                                                                             Microsoft Windows RPC
Microsoft Windows netbios-ssn
        445/tc; open microsoft-ds
1433/tcp open ms-sql-s
3389/ccp sen ssl/ms-wht-server?
                                                                                              Microsoft Windows Server 2000 F.2 2012 n
Microsoft SQL Server 2012 11.00.2100; RTM
                                                                                                                                                                                     2812 microsoft-ds
3389/cp see ssl/ms-wht-ser
          49154/tcp open msrpc Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
         Nmap scan report for 172.16.5:
Host is up (0.0033s latency).
Not shown: 994 filtered ports
PORT STATE SERVICE
135/tcp open msrpc
139/tcp open netbios-ssn
445/tcp open microsoft-ds
1028/tcp open msrpc
3380/tcp open msrpc
                                                                                            VERSION
                                                                                           VERSION
Microsoft Windows RPC
Microsoft Windows netbios-ssn
Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
Microsoft Windows RPC
          3389/tcp open ssl/ms-wbt-server?
5666/tcp open tcpwrapped
          Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
          Nmap scan report for golsrvesx06.gold.local (172.16.52.61)
Host is up (0.0034s latency).
Not shown: 989 filtered ports
```



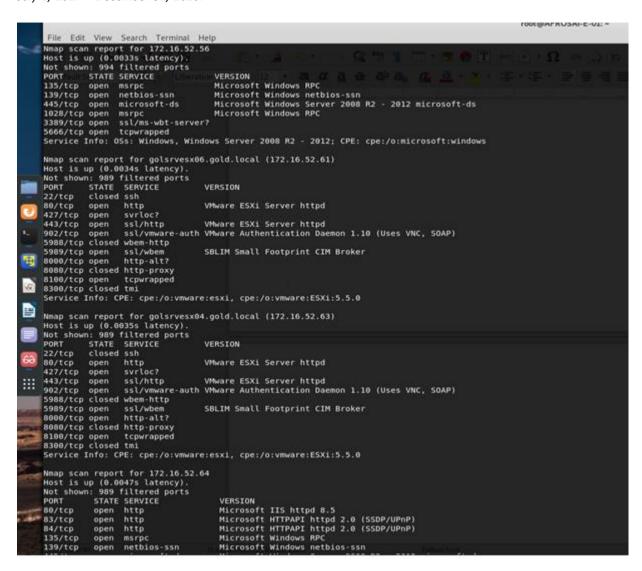
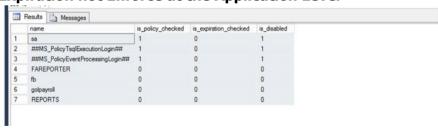


Exhibit 7 Password Expiration not Enforce at the Application Level







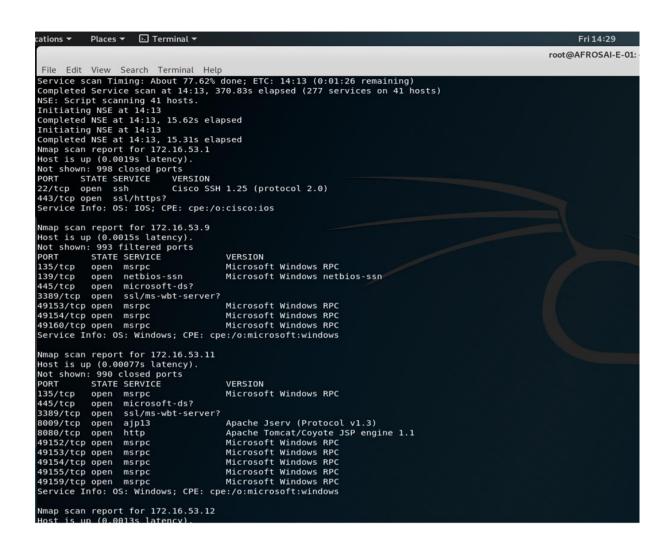


Table 1 End of Life of Computing and network Equipment

| Application Supported | Server Model | End of Life Date |
|---|------------------------|-------------------------|
| Free Balance (IFMIS) Application Server | HP Blade Server B 160C | 12/31/2010 |
| Free Balance (IFMIS) Application Server | HP Blade Server B 160C | 12/31/2010 |
| Free Balance (IFMIS) Staging Server | HP Blade Server B 160C | 12/31/2010 |
| Free Balance (IFMIS) County Treasure Server | HP Blade Server B 1600 | 212/31/2010 |
| Free Balance (IFMIS) Reporting Server | HP Blade Server B 160C | 12/31/2010 |
| Free Balance (IFMIS) Production Database Serve HP | rBlade Server B 160C | 12/31/2010 |
| Free Balance (IFMIS) Production Database Server | HP Blade Server B 160C | 12/31/2010 |

Table 2: Inadequate resources for failover to passive node on the IFMIS application and database clusters



| Name | Туре | Current Server | Allocation | Recommended By Vendor | Requirements |
|---------------------------------|----------|----------------|------------|--------------------------|--------------|
| | | Memory | CPU | Memory | CPU |
| Application server / Web server | 1Active | 64GB | 2 core | 128GB | 6 core |
| Application server / Web server | 2Passive | 28GB | 2 core | 128GB | 6 core |
| Database server 1 | Active | 64GB | 2 core | 128GB | 4 core |
| Database server 2 | Passive | 28GB | 2 core | 128GB | 4 core |

Table 3 Users who are transferred or no longer with the entity

| ı | able | e 3 Users who a | ire transferred or no | longer with the entity | |
|---|------|-----------------|-----------------------|---------------------------|-----------------|
| Ν | lo | Entity | User ID | User Name | Last Login Date |
| 1 | | CNDRA | wkyne | Winston G. Kyne | 01/24/2019 |
| 2 | | CNDRA | sgortor | Sumo G. Gortor | 01/10/2018 |
| 3 | ; | CSA | jkannehson | James F. Kannehson | 10/16/2018 |
| 4 | | EPA | jzaquoi | James Z. Aquoi | 07/29/2018 |
| 5 |) | EPA | ntblama | Nathaniel T. Blama Sr. | 09/14/2020 |
| 6 | | Judiciary | jtoryor | John T. Toryor | 10/21/2018 |
| 7 | ' | LACC | jverdier | Cllr. James N. Verdier Jr | 09/25/2020 |
| 8 | | LCPS | ujallah | Ucita N. B. Jallah | 09/20/2016 |
| 9 |) | LCPS | sbkennedy | Dr. Stephen B. Kennedy | - |
| | .0 | LISGIS | Mdweh | Melvin N. Weh | 04/18/2019 |
| | 1 | LISGIS | wmorris | Williette Morris | 05/21/2019 |
| 1 | 2 | LISGIS | tmwesso | T. Monroe Wesso | 02/07/2019 |
| 1 | .3 | LLA | jmvanyanbah | Juluis M. Vanyanbah | - |
| 1 | 4 | LLA | rclark | Romeo R. Clarke | - |
| 1 | .5 | MFDP | rpewee | Richard M. Pewee | 03/30/2020 |
| 1 | .6 | MFDP | gmerriam | Geoegiva Merriam | 02/18/2020 |
| 1 | .7 | MFDP | jtugume | James Tugume | - |
| | .8 | MFDP | kmilward | Kath Milward | - |
| 1 | 9 | MFDP | pmacmillan | Phil Macmillan | - |
| 2 | .0 | MFDP | esebleh | Elijah J. Sebleh | 02/28/2018 |
| 2 | 1 | MFDP | kforko | Kumbah Forko | 05/16/2018 |
| | 2 | MFDP | tnamanya | Timothy Namanya | 08/05/2019 |
| 2 | :3 | MFDP | bekenny | Benjamin Eeonee Kenny | 12/08/2019 |
| | 4 | MFDP | dbkamara | Dauda B. Kamara | 06/26/2019 |
| | :5 | MIA- Bong | tkcisco | Thomas K. Cisco | - |
| 2 | 6 | MIA -Bong | snarmei02 | Senamue P. Narmei | 03/06/2019 |
| 2 | .7 | MIA-Nimba | gdahn12 | Gonpa Osunou Dahn | 03/30/2020 |
| | .8 | MIA-Nimba | azamay12 | Allison Y. Zamay Sr. | 02/14/2019 |
| | 9 | MIA-Nimba | dcooper12 | D. Dorr Cooper | 03/30/2020 |
| | 0 | MIA-Nimba | etokpah | Edward Tokpah | 02/19/2019 |
| 3 | 1 | MOFA | meesiah | Edward M. Eesiah | 10/16/2018 |
| | | | | | |



| 32 | MOT | edowaity | Shelton Kraty Dowaity | 02/19/2020 |
|----|-----|----------|------------------------|------------|
| 33 | NEC | calighe | C. A. Lamin Lighe | 09/30/2020 |
| 34 | NIC | gwisner | George Gyude Wisner II | 07/17/2018 |
| 35 | NIC | gireland | Gabriel A. Ireland | 09/27/2016 |



Exhibit 8: Ineffective issue resolution/Management Controls

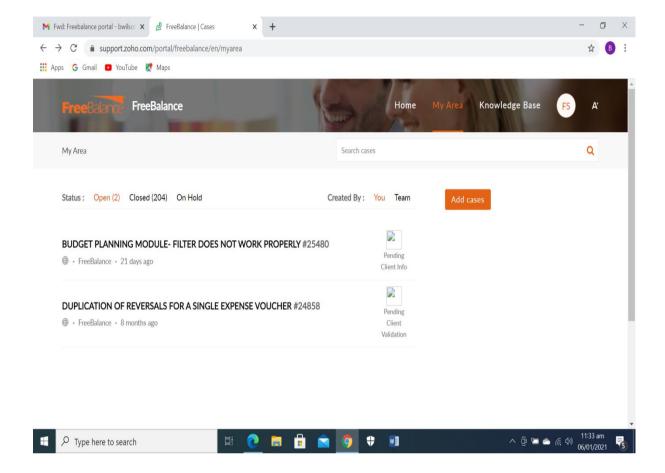




Exhibit 9: Inadequacy Coding Block

| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|---------------------|---|------------|----------|
| xxxxxx/x/xx/xxx/xxxx/xxxxx/xxxxx/xxxx/xxxx | 415102 | | DRUGS AND MEDICAL CONSUMABLE IN FAVOR OF ZRTTI FOR THE MONTH OF SEPT'018 | | 865.87 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | Severance Benefit for Redundant Employee of LPMC, Sept. '18 / LACRA | | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | Severance Benefit for Redundant Employee of LPMC, Sept. '18 / LACRA | | 500.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | Severance Benefit for Redundant Employee of LPMC, Sept. '18 / LACRA | | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | Severance Benefit for Redundant Employee of LPMC, Sept. '18 / LACRA | | 700.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | 20% LRD Retirement Benefit for September 2018 | | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 162257 | 20% LRD Retirement Benefit for September 2018 | 0.00 | 182.54 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 162989 | 20% General & Special allowance Oct. 2018 | 7,343.46 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 162989 | 20% General & Special allowance Oct. 2018 | 0.00 | 7,343.46 |
| xxxxxx/x/xx/xxx/xxxx/xxxxx/xxxxx/xxxx/xxxx | 415102 | 163043 | CATERING FOR AUGUST 2018/ LNP | 317.51 | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 163043 | LRD 40% ASSORTED FOOD STUFF AND CATERING FOR AUGUST 2018/ LNP | | 317.51 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | Service Rendered MICAT for the Month of Oct. 2018 | | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 163357 | Service Rendered MICAT for the Month of Oct. 2018 | 0.00 | 307.80 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 163628 | GOL DEBT OWED WILLIAM E. DENNIS VS K & | 151,368.00 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|---------------------|---|--------|------------|
| | | | Н | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 163628 | GOL DEBT OWED WILLIAM E. DENNIS VS K & | | 151,368.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 163641 | Payment represent transfer to Margibi Service Center | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 163641 | Payment represent transfer to Margibi Service Center | 0.00 | 2,500.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 163648 | Purchase of stationery for MIA Margibi, 2018 | 72.00 | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 163648 | Purchase of stationery for MIA Margibi, 2018 | 0.00 | 72.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Purchase of Cleaning Materials for MIA Margibi, 2018 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Purchase of Cleaning Materials for MIA Margibi, 2018 | | 171.84 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 163659 | Payment represent repair and maintenance for MIA Margibi, 2018 | | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | 163659 | Payment represent repair and maintenance for MIA Margibi, 2018 | | 46.85 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | GOL DEBT OWED TO WILLIAM E. DENNIS,Sr. REALTY TRUST | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | GOL DEBT OWED TO WILLIAM E. DENNIS,Sr. REALTY TRUST | | 121,972.00 |
| XXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment for MIA Bassa Administration spare parts for vehicle for September 2018 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 165063 | Payment for MIA Bassa Administration spare parts for vehicle for September 2018 | | 47.30 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 165070 | Purchase of Stationery for MIA Bassa Administration for September 2018 | 45.00 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|---------------------|--|-----------|------------|
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 165070 | Purchase of Stationery for MIA Bassa Administration for September 2018 | | 45.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | 80% Salary for Presidential Appointees for Dec. '18 / MFDP | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | 80% Salary for Presidential Appointees for Dec. '18 / MFDP | | 85,565.71 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415102 | | Purchase of Cleaning Materials for MIA Bassa Administration for September 2018 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Purchase of Cleaning Materials for MIA Bassa Administration for September 2018 | | 67.12 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | OPERATION IN FAVOR PHSN FOR THE MONTH OF DEC'018 | | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | OPERATION IN FAVOR PHSN FOR THE MONTH OF DEC'018 | | 245,872.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | Air lifting of Cash to Grandcess & Fish Town for Oct., Nov. & Dec. '18 / MFDP | | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 166943 | Air lifting of Cash to Grandcess & Fish Town for Oct., Nov. & Dec. '18 / MFDP | 0.00 | 77,040.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415102 | 166989 | Payment as professional services rendered the government of Liberia through the Ministry of Commerce and Industry. | | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415102 | 166989 | Payment as professional services rendered the government of Liberia through the Ministry of Commerce and Industry. | | 6,574.50 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 167029 | GOL OBLIGATION TO INTERNAL ORGANIZATION LIKE(AATPO AND FAO) | 22,500.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167029 | GOL OBLIGATION TO INTERNAL | 0.00 | 22,500.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|---------------------|---|-----------|------------|
| | | | ORGANIZATION LIKE(AATPO AND FAO) | | |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415102 | 167030 | COST FOR WATER TREATMENT CHEMICALS SPARE PARTS AND MAINTENANCE IN FAVOR LWSC FOR THE MONTH OF NOV'018 | | 0.00 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415102 | 167030 | COST FOR WATER TREATMENT CHEMICALS SPARE PARTS AND MAINTENANCE IN FAVOR LWSC FOR THE MONTH OF NOV'018 | | 350,000.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167087 | GOL OBLIGATION TO INTERNAL ORGANIZATION LIKE(AATPO AND FAO) | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167087 | GOL OBLIGATION TO INTERNAL ORGANIZATION LIKE(AATPO AND FAO) | | 22,500.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | Payment for scratch cards for second quarter FY-2018/19 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167580 | Payment for scratch cards for second quarter FY-2018/19 | 0.00 | 266,660.67 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167737 | Payment for travel to senegal and Ivory Coast | 17,955.70 | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 167737 | Payment for travel to senegal and Ivory Coast | 0.00 | 17,955.70 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167744 | Payment for travel to Senegal & Ivory Coast | 3,057.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167744 | Payment for travel to Senegal & Ivory Coast | 0.00 | 3,057.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167746 | Payment for travel to Senegal & Ivory Coast | 3,057.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167746 | Payment for travel to Senegal & Ivory Coast | 0.00 | 3,057.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 167747 | Payment for travel to senegal and Ivory Coast | 3,317.00 | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 167747 | Payment for travel to senegal and Ivory Coast | 0.00 | 3,317.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 167748 | Payment for travel to senegal and Ivory Coast | 3,057.00 | 0.00 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167748 | Payment for travel to senegal and Ivory Coast | 0.00 | 3,057.00 |
| XXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167749 | Payment for travel to senegal and Ivory Coast | 3,057.00 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|---------------------|--|----------|------------|
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 167749 | Payment for travel to senegal and Ivory Coast | 0.00 | 3,057.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167750 | Payment for travel to senegal and Ivory Coast | 3,057.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167750 | Payment for travel to senegal and Ivory Coast | 0.00 | 3,057.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167752 | Payment for travel to senegal and Ivory Coast | 3,057.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167752 | Payment for travel to senegal and Ivory Coast | 0.00 | 3,057.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167753 | Payment for travel to senegal and Ivory Coast | 3,057.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 167753 | Payment for travel to senegal and Ivory Coast | 0.00 | 3,057.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment for air ticket to senegal and Ivory Coast | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment for air ticket to senegal and Ivory Coast | | 61,191.36 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | DEA 100% LRD of Intelligence Services for the month of January, 2019 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | DEA 100% LRD of Intelligence Services for the month of January, 2019 | | 50,000.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Service Rendered MICAT for the month of Dec. 2018 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Service Rendered MICAT for the month of Dec. 2018 | | 208.42 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 168158 | Payment represents security operation for the month of january to march 2019 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 168158 | Payment represents security operation for the month of january to march 2019 | | 900,000.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | OFFICE BUILDING RENTAL FOR PERIOD OF SEPT'018-AUG'019 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 169603 | OFFICE BUILDING RENTAL FOR PERIOD OF SEPT'018-AUG'019 | 0.00 | 27,895.62 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|---------------------|--|--------------|--------------|
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 169680 | | 1,176,000.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 169680 | Payment for 50% completion of 5km neighborhood Road in ELWA community | | 1,176,000.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment for repairs of two log bridges along the Jenemana Town road in Grand Cape Mount. | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 169692 | Payment for repairs of two log bridges along the Jenemana Town road in Grand Cape Mount. | 0.00 | 125,000.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 169751 | GOL obligation Jan 2019 LIBTEICo | 153,600.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/XXXX | 415102 | 169751 | GOL obligation Jan 2019 LIBTEICo | 0.00 | 153,600.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/XXXX | 415102 | 169778 | 20% General allowance Jan 2019 GAC | 2,717.75 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/XXXX | 415102 | 169778 | 20% General allowance Jan 2019 GAC | 0.00 | 2,717.75 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | PAYMENT FOR 20% CONSULTANT GENERAL ALLOWANCE FOR THE MONTH OF FEBRUARY IN FAVOR OF NCCS. | 467.47 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 169980 | PAYMENT FOR 20% CONSULTANT GENERAL ALLOWANCE FOR THE MONTH OF FEBRUARY IN FAVOR OF NCCS. | 0.00 | 467.47 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 170185 | Allotment for Audit fees | 70,000.00 | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 170185 | Allotment for Audit fees | 0.00 | 70,000.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | | Gasoline supply in coupons for the month of December, 2018. | | 0.00 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415102 | | Gasoline supply in coupons for the month of December, 2018. | | 2,875.36 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 170218 | ALLOTMENT FOR GOODS AND SERVICES FOR JANUARY 2018/2019 | 66,331.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 170218 | ALLOTMENT FOR GOODS AND SERVICES FOR | 0.00 | 66,331.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|---------------------|--|-----------|-----------|
| | | | JANUARY 2018/2019 | | |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | National Social Security Contribution from Nov. 1 - Dec. 31, '18 | | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | National Social Security Contribution from Nov. 1 - Dec. 31, '18 | | 66,724.74 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | 60% Payment for the Grand Bassa County Health for February ,2019 | | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | 60% Payment for the Grand Bassa County Health for February ,2019 | | 15,000.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment for rental Sept 1, 2018-August 31, 2019 | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment for rental Sept 1, 2018-August 31, 2019 | | 96,866.41 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payroll Services Rendered GOL Covering Sept. & Oct. '18 / MFDP | | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | Payroll Services Rendered GOL Covering Sept. & Oct. '18 / MFDP | | 15,460.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | PAYMENT OF ALLOTMENT FOR THE MONTH APRIL 2019 | | 0.00 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415102 | 173327 | PAYMENT OF ALLOTMENT FOR THE MONTH APRIL 2019 | 0.00 | 16,000.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 173351 | Salary for the month of April 2019 NHA | 32,290.45 | 0.00 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 173351 | Salary for the month of April 2019 NHA | 0.00 | 32,290.45 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415102 | 174093 | payment for 20% consultant general allowance for the month of April 2019 in favor of NCCS. | 1,156.85 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 174093 | payment for 20% consultant general allowance for the month of April 2019 in favor of NCCS. | 0.00 | 1,156.85 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|---------------------|--|------------|------------|
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 174346 | 2nd Request Payment for the Construction of Popo Beach Victims Home that were Destroyed by Fire / LACE | | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 174346 | 2nd Request Payment for the Construction of Popo Beach Victims Home that were Destroyed by Fire / LACE | | 300,000.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 174421 | Payment as cost covering the planning and preparation of the MFDP sports team for the 2019 Inter-ministerial Tournament. | | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 174421 | Payment as cost covering the planning and preparation of the MFDP sports team for the 2019 Inter-ministerial Tournament. | | 27,370.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 174932 | MOD PAYMENT FOR THE CONSTRUCTION OF THE 14 MILITARY HOSPITAL, APRIL 2019 | 375,000.00 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 174932 | MOD PAYMENT FOR THE CONSTRUCTION OF THE 14 MILITARY HOSPITAL, APRIL 2019 | 0.00 | 375,000.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 175184 | Liberia Annual Contribution to the ACP Secretariat / MFDP | 21,959.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 175184 | Liberia Annual Contribution to the ACP Secretariat / MFDP | 0.00 | 21,959.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 175768 | Interest/Commitment Charges / MFDP | 83,581.68 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 175768 | Interest/Commitment Charges / MFDP | 0.00 | 83,581.68 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 175867 | | 32,798.59 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 175867 | , , | 0.00 | 32,798.59 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 175868 | | 4,675.62 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 175868 | · · · · · · · · · · · · · · · · · · · | 0.00 | 4,675.62 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 176371 | Payment of monthly allowance for foreign | 3,500.00 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|---------------------------|---|------------|------------|
| | | | student | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 176371 | Payment of monthly allowance for foreign student | 0.00 | 3,500.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 176629 | Payment for emergency expenditure (Bali Island, Timbo River, Jenemanah, Logan Town RAP, Internal operations & Domestic travel/international) | 235,000.00 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415102 | 176629 | Payment for emergency expenditure (Bali Island, Timbo River, Jenemanah, Logan Town RAP, Internal operations & Domestic travel/international) | 0.00 | 235,000.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 176766 | ALLOTMENT FOR JUNE 2019 SALARY | 218,249.82 | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 176766 | | 0.00 | 218,249.82 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | | Withholding Tax Payable (2%) for the Month of Sept. '18 | | 293.68 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000006784 | Withholding Tax Payable (2%) for the Month of Sept. '18 | 293.68 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-0000000000008266 | Withholding Tax Payable (2%) from Sept. 1 - 30, 2018 | 0.00 | 10,886.80 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000008266 | 130, 2018 | , | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | | Withholding Tax Payable(2%) from Oct. 1 - 31, 2018 | | 3,694.26 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000012562 | Withholding Tax Payable(2%) from Oct. 1 - 31, 2018 | 3,694.26 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 170 19-00000000000 1775 1 | Withholding Tax Payable (2%) from Nov. 1 - Dec. 31 '18 | 0.00 | 13,076.03 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|-----------------------|---|-----------|----------|
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000017251 | Withholding Tax Payable (2%) from Nov. 1 - Dec. 31 '18 | 13,076.03 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000005529 | payment for the purchase of Air Ticket to Ghana, for Entry Visas, Amputee national Team./ MYS | | 421.40 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415105 | | payment for the purchase of Air Ticket to Ghana, for Entry Visas, Amputee national Team./ MYS | | 8.60 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415105 | | DRUGS AND MEDICAL CONSUMABLE IN FAVOR OF ZRTTI FOR THE MONTH OF SEPT'018 | | 17.67 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415102 | | Drugs and Medical Consumables for the Month of Sept. '18 / KRTTI | | 783.51 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415105 | 2019-000000000006121 | Drugs and Medical Consumables for the Month of Sept. '18 / KRTTI | 0.00 | 15.99 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-0000000000007003 | Payment for the procurement of HP Laserjet Pro MFP m227Sdn printer (Three in One) for used by the Budget & Finance Unit of the MFDP in favor of Office Ideas. | | 274.40 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/ | 415105 | | Payment for the procurement of HP Laserjet Pro MFP m227Sdn printer (Three in One) for used by the Budget & Finance Unit of the MFDP in favor of Office Ideas. | | 5.60 |
| XXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/ | 415102 | | DRUGS AND MEDICAL CONSUMABLE IN FAVOR WRTTI FOR THE MONTH OF SEPT'018 | | 783.92 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415105 | 2019-000000000007065 | DRUGS AND MEDICAL CONSUMABLE IN FAVOR WRTTI FOR THE MONTH OF SEPT'018 | 0.00 | 16.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000007087 | Food and Catering Services for the Month of | 0.00 | 3,528.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|-----------------------|--|--------|-----------|
| | | | Sept. '18 / KRTTI | | |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000007087 | Food and Catering Services for the Month of Sept. '18 / KRTTI | 0.00 | 72.00 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-0000000000007230 | Payment for GSM Scratch Cards and Ten Modern (Alcatel MW40V LTE Link Zone Wifi, These Iterms is to be use by Central Administration | 0.00 | 294.00 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-0000000000007230 | Payment for GSM Scratch Cards and Ten Modern (Alcatel MW40V LTE Link Zone Wifi, These Iterms is to be use by Central Administration | 0.00 | 1.68 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-0000000000007235 | Payment for GSM Scratch Cards and Ten Modern (Alcatel MW40V LTE Link Zone Wifi, These Iterms is to be use by Central Administration | 0.00 | 2.52 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-0000000000007235 | Payment for GSM Scratch Cards and Ten Modern (Alcatel MW40V LTE Link Zone Wifi, These Iterms is to be use by Central Administration | 0 00 | 6.48 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000007550 | Stationery | 0.00 | 1,489.60 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000007550 | Stationery | 0.00 | 30.40 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | OTHER FIXED ASSETS IN FAVOR WRTTI FOR THE MONTH OF SEPT'018 | | 46,689.23 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | | OTHER FIXED ASSETS IN FAVOR WRTTI FOR THE MONTH OF SEPT'018 | | 952.84 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000007961 | Payment for the provision of Three (3) half pages of advertisement for the supply & | 0.00 | 352.80 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|-----------------------|--|--------|-----------|
| | | | delivery of stationery for the MFDP in favor of | | |
| | | | the New Dawn newspaper | | |
| | | | Payment for the provision of Three (3) half | | |
| xxxxxx/x/xx/xxx/xxxxxx/xxxxx/xxxx/xxxx/ | 415105 | 2019-000000000007961 | pages of advertisement for the supply & | 0.00 | 7.20 |
| | 113103 | | delivery of stationery for the MFDP in favor of | 0.00 | 7.20 |
| | | | the New Dawn newspaper | | |
| | | | Payment for the publication of Two (2) color | | |
| | | | half pages birthday greetings for the President | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | of Liberia, His Excellency Dr. George Manneh | | 176.40 |
| | | | Weah as public service announcement of the | :he | |
| | | | MFDP in the New Democrat newspaper | | |
| | | | Payment for the publication of Two (2) color | | |
| | | | half pages birthday greetings for the President | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | of Liberia, His Excellency Dr. George Manneh | | 3.60 |
| | | | Weah as public service announcement of the | | |
| | | | MFDP in the New Democrat newspaper | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000007994 | LRD 40% AGRICULTURE CHEMICAL FOR | 0.00 | 12,606.81 |
| 7000000,4704,7004,70000004,700004,700004 | 110102 | 2013 00000000000733 1 | MOGOSI / SELLEMBER 2010 / CARL | | 12,000.01 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000007994 | LRD 40% AGRICULTURE CHEMICAL FOR | 0.00 | 257.28 |
| 7000000,4704,7004,70000004,700004,700004 | 110100 | | AUGUST / SELTEMBER 2010 / CART | | 25,125 |
| | | | Payment for the procurement of vehicle spare | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000008587 | parts for vehicle with license plate number LB- 1651 of the MFDP in favor of Master Trading | 0.00 | 435.12 |
| | | | _ | | |
| | | | Center | | |
| | | | Payment for the procurement of vehicle spare | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | parts for vehicle with license plate number LB- | | 8.88 |
| | | | 1651 of the MFDP in favor of Master Trading | | |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|-----------------------|--|--------|------------|
| | | | Center | | |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000008595 | Payment for the procurement of vehicle spare parts for vehicle with license plate number LB- 1651 of the MFDP in favor of Master Trading Center | 0.00 | 290.08 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000008595 | Payment for the procurement of vehicle spare parts for vehicle with license plate number LB-1651 of the MFDP in favor of Master Trading Center | | 5.92 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-0000000000008602 | Payment for the procurement of vehicle spare parts for utility vehicle with license late number LB-1664 assigned to the office of the Minister of Finance & Development Planning in favor of Master Trading Center | 0.00 | 441.39 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000008602 | Payment for the procurement of vehicle spare parts for utility vehicle with license late number LB-1664 assigned to the office of the Minister of Finance & Development Planning in favor of Master Trading Center | 0.00 | 9.01 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415102 | 2019-000000000008935 | Payment represents advance payment for asphalt pavement of neighborhood road lot # 5 | 0.00 | 689,920.00 |
| XXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000008935 | Payment represents advance payment for asphalt pavement of neighborhood road lot # 5 | 0.00 | 14,080.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | 2019-0000000000009073 | Payment In-favor Saar Insurance, Premium for the Employees of the MFDP, Administration Share of the Medical Insurance Premium for Month of November 2018 | 0.00 | 7,990.92 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|---|--------|-----------|
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | | Payment In-favor Saar Insurance, Premium for the Employees of the MFDP, Administration Share of the Medical Insurance Premium for Month of November 2018 | 0.00 | 163.08 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415102 | | Payment represents Security Services rendered from July-October,2018 | | 21,168.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | | Payment represents Security Services rendered from July-October,2018 | | 432.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | Payment represents Security Services rendered from July-October,2018 | | 5,291.93 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415105 | | Payment represents Security Services rendered from July-October,2018 | | 108.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/XXXX | 415102 | | Payment for security services rendered to LISGIS for the months July to October 2018 | | 5,715.36 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000009864 | Payment for security services rendered to LISGIS for the months July to October 2018 | 0.00 | 116.64 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000010376 | Repair & maintenance of MOS vehicles | 0.00 | 2,566.42 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000010376 | Repair & maintenance of MOS vehicles | 0.00 | 52.38 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/ | 415102 | | Payment for the provision of catering services for Fifty (50) persons who attended the Budget Support Working Group meeting on September 17, 2018 in favor of Jay's Daughter Enterprise | n nn | 480.20 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000010525 | Payment for the provision of catering services for Fifty (50) persons who attended the Budget Support Working Group meeting on September 17, 2018 in favor of Jay's Daughter Enterprise | 0 00 | 9.80 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000011126 | Reversal Expense Voucher 2019- | 117.60 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|---|--------|-----------|
| | | | 00000000007967 | | |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415105 | | Payment for the publication of Two (2) color half pages birthday greetings for the President of Liberia, His Excellency Dr. George Manneh Weah as public service announcement of the MFDP in the New Democrat newspaper | 2.40 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | Payment for four months internet subscription at the Liberia Business Registration | | 13,110.64 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000011597 | Payment for four months internet subscription at the Liberia Business Registration | 0.00 | 267.56 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000012115 | Payment for the procurement of Twenty-Five (25) pieces of tyres for Nineteen (19) vehicles that are to be repaired by Transport Unit of the MFDP in favor of Master Trading Center | 0.00 | 1,811.04 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000012115 | Payment for the procurement of Twenty-Five (25) pieces of tyres for Nineteen (19) vehicles that are to be repaired by Transport Unit of the MFDP in favor of Master Trading Center | 0.00 | 36.96 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000012325 | USD 60% ASSORTED CLEANING MATERIALS FOR SEPTEMBER 2018 / LNP | | 1,589.36 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000012325 | USD 60% ASSORTED CLEANING MATERIALS FOR SEPTEMBER 2018 / LNP | | 32.44 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-00000000012326 | LRD 40% ASSORTED CLEANING MATERIALS FOR SEPTEMBER 2018 / LNP | | 1,059.58 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-00000000012326 | LRD 40% ASSORTED CLEANING MATERIALS FOR SEPTEMBER 2018 / LNP | 0.00 | 21.62 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000012394 | Repairs and maintenance Nov. 2018 | 0.00 | 6,925.76 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|--|--------|----------|
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000012394 | Payment for repairs and maintenance | 0.00 | 141.34 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000012641 | Payment for scratch card Oct. 2018 | 0.00 | 979.91 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000012641 | Payment for scratch card Oct. 2018 | 0.00 | 12.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000012641 | Payment for scratch card Oct. 2018 | 0.00 | 8.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000012746 | scratch card November 2019 KRTTI | 0.00 | 2,058.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000012746 | scratch card November 2019 KRTTI | 0.00 | 42.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000012771 | Payment In-favor Saar Insurance Premium for the Employees of the MFDP, Administration share of the medical insurance premium for the month of November 2018 | 0.00 | 8,087.94 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000012771 | Payment In-favor Saar Insurance Premium for the Employees of the MFDP, Administration share of the medical insurance premium for the month of November 2018 | 0.00 | 165.06 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000012776 | Payment for the procurement of One (1) piece of laptop computer to be used by the Executive Assistant assigned in the Deputy Minister for Administration office of the MFDP in favor of Techno I.T Inc | 0.00 | 539.00 |
| xxxxxxx/x/xxx/xxxx/xxxxx/xxxxx/xxxx/ | 415105 | 2019-000000000012776 | Payment for the procurement of One (1) piece of laptop computer to be used by the Executive Assistant assigned in the Deputy Minister for Administration office of the MFDP in favor of Techno I.T Inc | 0.00 | 11.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000013234 | Payment for the provision of repairs & maintenance services for vehicle with license plate number LB-1674 assigned to the Chief of | 0.00 | 666.40 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|--|--------|----------|
| | | | Office Staff (COS) of the Minister of the MFDP | | |
| | | | in favor of Legend Services Corporation | | |
| | | | Payment for the provision of repairs & | | |
| | | | maintenance services for vehicle with license | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000013234 | plate number LB-1674 assigned to the Chief of | 0.00 | 13.60 |
| | | | Office Staff (COS) of the Minister of the MFDP | | |
| | | | in favor of Legend Services Corporation | | |
| | | | Being payment of Security Guard services | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | rendered to LISGIS for the months of November | 0.00 | 2,857.68 |
| | | | and December 2018 | | |
| | | | Being payment of Security Guard services | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | rendered to LISGIS for the months of November | 0.00 | 58.32 |
| | | | and December 2018 | | |
| | | 2019-000000000013341 | Payment for the procurement of office | | |
| | | | equipment (visitor chairs, water dispenser, mini | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | icebox & AC) to be used in the office of the | 0.00 | 427.28 |
| | | | Procurement Unit of the MFDP in favor of Office | | |
| | | | Express | | |
| | | | Payment for the procurement of office | | |
| | | | equipment (visitor chairs, water dispenser, mini | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000013341 | icebox & AC) to be used in the office of the | 0.00 | 8.72 |
| | | | Procurement Unit of the MFDP in favor of Office | | |
| | | | Express | | |
| | | | Payment for the provision of repairs & | | |
| XXXXXX/X/XX/XXX/XXXXXXXXXXXXXXXXXXXXXX | 415102 | 2019-000000000013417 | maintenance services for vehicle with license | 0.00 | 1,470.00 |
| , , , , ,,,,, | | | plate number LB-1673 of the MFDP in favor of | | |
| | | | Legend Services Corporation | | |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|---|--------|------------|
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000013417 | Payment for the provision of repairs & maintenance services for vehicle with license plate number LB-1673 of the MFDP in favor of Legend Services Corporation | 0.00 | 30.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000013418 | Payment for the provision of repairs & maintenance services for vehicle with license plate number LB-1673 of the MFDP in favor of Legend Services Corporation | 0.00 | 980.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000013418 | Payment for the provision of repairs & maintenance services for vehicle with license plate number LB-1673 of the MFDP in favor of Legend Services Corporation | 0.00 | 20.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000013841 | Payment for Repairs and Maintenance-Civil from Building Materials Center in favor of Monrovia Consolidated School System for the month of November 2018. | 0.00 | 142,688.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000013841 | Payment for Repairs and Maintenance-Civil from Building Materials Center in favor of Monrovia Consolidated School System for the month of November 2018. | 0.00 | 2,912.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000014292 | REPAIRS AND MAINTENANCE -VEHICLE IN FAVOR AITB FOR THE MONTHS OF SEPT-OCT'018 | 0.00 | 1,176.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000014292 | REPAIRS AND MAINTENANCE -VEHICLE IN FAVOR AITB FOR THE MONTHS OF SEPT- OCT'018 | 0.00 | 24.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-00000000014349 | Payment for the procurement of vehicle repairs | 0.00 | 235.20 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|---|--------|------------|
| | | | & maintenance services for vehicle marked LB- | | |
| | | | 1614 assigned to the Procurement Unit of the | | |
| | | | MFDP in favor of Legend Services Corporation | | |
| | | | Payment for the procurement of vehicle repairs | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000014349 | & maintenance services for vehicle marked LB- | 0.00 | 4.80 |
| | | | 1614 assigned to the Procurement Unit of the | | |
| | | | MFDP in favor of Legend Services Corporation | | |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Cost of Civil Work for the Month of November 2018 | | 3,894.36 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000014732 | Cost of Civil Work for the Month of November 2018 | 0.00 | 79.48 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2010_000000000014740 | PAYMENT REPRESENTING THE COST OF VEHICLE INSURANCE INFAVOR FIU/NOV 2018 | 0.00 | 2,631.01 |
| | | | PAYMENT REPRESENTING THE COST OF | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000014/40 | VEHICLE INSURANCE INFAVOR FIU/NOV 2018 | | 53.69 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000014881 | Payment for refurbishment work on the Rehab | 0.00 | 194,193.04 |
| | | | Community Road Project | | , |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | Payment for refurbishment work on the Rehab Community Road Project | | 3,963.12 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000014966 | MOD PAYMENT FOR MORTUAL SERVICES, JANUARY 2019 | 0.00 | 7,574.75 |
| | | | MOD PAYMENT FOR MORTUAL SERVICES, | | |
| XXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000014966 | JANUARY 2019 | 0.00 | 154.59 |
| | | | PART PAYMENT FOR 85% COMPLETION OF | | |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | THE ASPHALT PAVEMENT CONSTRUCTION | 0.00 | 379,027.74 |
| | | | PROJECT OF DOE COMMUNITY ROAD(2.7KM) | | |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-00000000015018 | PART PAYMENT FOR 85% COMPLETION OF | 0.00 | 7,735.26 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|---|----------|--------------|
| | | | THE ASPHALT PAVEMENT CONSTRUCTION | | |
| | | | PROJECT OF DOE COMMUNITY ROAD(2.7KM) | | |
| | | | PART PAYMENT FOR 50% COMPLETION OF | | |
| | | | THE ASPHALT PAVEMENT OF NEIGHBORHOOD | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000015021 | ROAD(ARC BISHOP MACHIEL FRANCIS ROAD, | 0.00 | 1,238,883.66 |
| | | | VOKAR MISSION ROAD,& LOGAN TOWN | | |
| | | | BROAD STREET AS LOT 2 | | |
| | | | PART PAYMENT FOR 50% COMPLETION OF | | |
| | | | THE ASPHALT PAVEMENT OF NEIGHBORHOOD | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000015021 | ROAD(ARC BISHOP MACHIEL FRANCIS ROAD, | 0.00 | 25,283.34 |
| | | | VOKAR MISSION ROAD,& LOGAN TOWN | | |
| | | | BROAD STREET AS LOT 2 | | |
| | 415102 | 2019-000000000015083 | PAYMENT REPRESENTING THE COST OF | 1 694 20 | 1.694.20 |
| XXXXXX/X/XX/XXX/XXXXXXXXXXXXXXXXXXXXXX | | | STATIONERY FOR THE MINISTRY OF MINES | | |
| | | | AND ENERGY FOR THE MONTH OF OCTOBER | | 1,0520 |
| | | | 2018. | | |
| | | | PAYMENT REPRESENTING THE COST OF | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000015083 | STATIONERY FOR THE MINISTRY OF MINES | 0.00 | 29.60 |
| 7000000,470,470,0470,000,470,000,470,000,470,000,4 | 113103 | | AND ENERGY FOR THE MONTH OF OCTOBER | 0.00 | 23.00 |
| | | | 2018. | | |
| | | | Payment for the procurement of a laptop | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000015085 | computer to be used by the newly hired Assistant Director of Procurement of the MFDP | 0.00 | 539.00 |
| , | | | | | |
| | | | in favor Techno I.T Inc | | |
| | | | Payment for the procurement of a laptop | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000015085 | computer to be used by the newly hired | | 11.00 |
| | | | Assistant Director of Procurement of the MFDP | | |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|---|--------|------------|
| | | | in favor Techno I.T Inc | | |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000015092 | Payment for the procurement of IT materials (Laptop & Desktop computers) for use by the Technical Assistant & staff Assistant assigned in the Director of Administration office of the MFDP in favor Techno I.T Inc | 0.00 | 1,117.20 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000015092 | | 0.00 | 22.80 |
| XXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000015096 | MFDP in favor Techno I.T Inc | 0.00 | 744.80 |
| xxxxxx/x/xx/xxx/xxxx/xxxxx/xxxx/xxxx/ | 415105 | 2019-000000000015096 | Payment for the procurement of IT materials (Laptop & Desktop computers) for use by the Technical Assistant & staff Assistant assigned in the Director of Administration office of the MFDP in favor Techno I.T Inc | | 15.20 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000015100 | Payment for the procurement of desktop computer to be used in the office of the Assistant Economist/Expenditure Monitoring Unit of the MFDP in favor Techno I.T Inc | 0.00 | 431.20 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000015100 | Payment for the procurement of desktop computer to be used in the office of the Assistant Economist/Expenditure Monitoring Unit of the MFDP in favor Techno I.T Inc | | 8.80 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | | Nissan Patrol GRX SUV in favor the Honorable Members of the House of Representatives// this payment represent the Month January 2019 respectively | | 321,409.62 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-00000000015164 | Nissan Patrol GRX SUV in favor the Honorable Members of the House of Representatives// this | 0.00 | 6,559.38 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|---|--------|--------------|
| | | | payment represent the Month January 2019 | | |
| | | | respectively | | |
| | | | Toyota Prado TX-L D4D BVA SUV in favor of the | | |
| XXXXXX/X/XX/XXX/XXXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000015177 | Honorable Members of the House of the | 0.00 | 470,400.00 |
| | | | Representatives | | |
| VVVVVV /V | 415105 | 2019-000000000015177 | Toyota Prado TX-L D4D BVA SUV in favor of the Honorable Members of the House of the | | 0.600.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-0000000000151// | Representatives | 0.00 | 9,600.00 |
| | | | | | |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000015303 | Payment for the partition of the tinted glass door | 0.00 | 2,218.29 |
| | | | Payment for the partition of the tinted glass | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000015303 | door | 0.00 | 45.27 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000015310 | | 0.00 | 9.00 |
| XXXXXX/X/XX/XXX/XXXXXXXXXXXXXXXXXXXXXX | 415105 | 2019-000000000015310 | Payment for partition tinted glass door | 0.00 | 53.20 |
| | | | Payment represents the cost for assorted | | |
| XXXXXX/X/XX/XXX/XXXXXXXXXXXXXXXXXXXXXX | 415102 | 2019-000000000015542 | materials supplied in the month of | 0.00 | 20,580.00 |
| | | | January,2019 | | |
| | | | Payment represents the cost for assorted | | |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000015542 | materials supplied in the month of | 0.00 | 420.00 |
| | | | January,2019 | | |
| | | | Payment represents the cost for assorted | | |
| XXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000015549 | building materials supplied in the month of | 0.00 | 13,720.00 |
| | | | January | | |
| | | | Payment represents the cost for assorted | | |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000015549 | building materials supplied in the month of | 0.00 | 280.00 |
| | | | January | | |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-00000000015557 | Payment for 50% completion of 5km | 0.00 | 1,176,000.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|--|--------------|-----------|
| | | | neighborhood Road in ELWA community | | |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415105 | 2019-000000000015557 | PAYMENT FOR 50% COMPLETION OF 5KM NEIGHBORHOOD ROAD IN ELWA REHAB COMMUNITY | 0.00 | 24,000.00 |
| xxxxxx/x/xx/xxx/xxxx/xxxxx/xxxx/xxxx/ | 415102 | 2019-000000000015637 | payment as Insurance Premium In-favor of Staffs of MFDP as Administration share for the Month of Dec. 2018 | | 8,167.32 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000015637 | payment as Insurance Premium In-favor of Staffs of MFDP as Administration share for the Month of Dec. 2018 | | 166.68 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000015712 | Stationery for the month of October,2018 | 0.00 | 6,858.04 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000015712 | Stationery | 0.00 | 139.96 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000015811 | Stationery for pro-Tempore for December,2018 | 0.00 | 9,111.65 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000015811 | Stationery | 0.00 | 185.95 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000015851 | Stationery for Pro-Tempore for December,2018 | 0.00 | 6,034.13 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000015851 | Stationery | 0.00 | 123.15 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415102 | 2019-000000000015950 | Reversal Expense Voucher 2019- 00000000015557 | 1,176,000.00 | 0.00 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415105 | 2019-000000000015950 | PAYMENT FOR 50% COMPLETION OF 5KM NEIGHBORHOOD ROAD IN ELWA REHAB COMMUNITY | 24,000.00 | 0.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000016002 | PAYMENT REPRESENT 75.43% COMPLETION OF ASPHALT PATCHING GABRIEL TULKER TO ST. PAUL BRIDGE | | 97,143.48 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000016002 | PAYMENT REPRESENT 75.43% COMPLETION OF ASPHALT PATCHING GABRIEL TULKER TO ST. PAUL BRIDGE | | 1,982.52 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|--|------------|------------|
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000016018 | Cost of general repair | 0.00 | 172.52 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-00000000016018 | Cost of general repair | 0.00 | 3.52 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-00000000016031 | Cost of general repair | 0.00 | 109.56 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-00000000016031 | Cost of general repair | 0.00 | 2.24 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000016156 | Repair and Maintnance Civil | 0.00 | 3,880.07 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000016156 | Repair and Maintnance Civil | 0.00 | 79.18 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000016178 | PAYMENT FOR 50% COMPLETION OF 5KM NEIGHBORHOOD ROAD IN ELWA REHAB COMMUNITY | 0.00 | 470,930.35 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000016178 | PAYMENT FOR 50% COMPLETION OF 5KM NEIGHBORHOOD ROAD IN ELWA REHAB COMMUNITY | 0.00 | 9,610.82 |
| xxxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415102 | 2019-000000000016180 | PAYMENT FOR 50% COMPLETION OF 5KM NEIGHBORHOOD ROAD IN ELWA REHAB COMMUNITY | 0.00 | 705,600.00 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415105 | 2019-000000000016180 | PAYMENT FOR 50% COMPLETION OF 5KM NEIGHBORHOOD ROAD IN ELWA REHAB COMMUNITY | | 14,400.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-00000000016256 | | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-00000000016256 | LRD 40% ASSORTED FOOD STUFF AND CATERING FOR AUGUST 2018/ LNP | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000016268 | Reversal Expense Voucher 2019- 00000000015174 | • | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000016268 | SA Ford Everest in favor of the Honorable Members of the House of Representatives | 2,719.74 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000016271 | Reversal Expense Voucher 2019- | 321,409.62 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|---|------------|------------|
| | | | 00000000015164 | | |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000016271 | Nissan Patrol GRX SUV in favor the Honorable Members of the House of Representatives// this payment represent the Month January 2019 respectively | 6 550 38 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000016275 | Reversal Expense Voucher 2019- 00000000015851 | 6,034.13 | 0.00 |
| XXXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/XXXX | 415105 | 2019-000000000016275 | Stationery | 123.15 | 0.00 |
| XXXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/XXXX | 415102 | 2019-000000000016279 | Stationery for Pro-Tempore for December,2018 | 0.00 | 6,073.85 |
| XXXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/XXXX | 415105 | 2019-000000000016279 | Stationery | 0.00 | 123.96 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000016300 | Reversal Expense Voucher 2019- 00000000014930 | 490,000.00 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000016300 | Second and third payment for rehabilitation of 205 housing units in Gilbrata community as directed by the President of Liberia | | 0.00 |
| XXXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/XXXX | 415102 | 2019-000000000016464 | Payment for stationery materials Oct. 2018 | 0.00 | 2,528.40 |
| XXXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/XXXX | 415105 | 2019-000000000016464 | Payment for stationery materials Oct. 2018 | 0.00 | 51.60 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000016486 | SA FORD EVEREST SUV IN FAVOR OF THE HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | | 91,242.20 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000016486 | SA FORD EVEREST SUV IN FAVOR HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | 0.00 | 1,862.09 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000016488 | NISSAN PATROL GRX SUV IN FAVOR OF THE HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | | 218,357.40 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000016488 | NISSAN PATROL GRX SUV IN FAVOR OF THE | 0.00 | 4,456.27 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|---|--------|------------|
| | | | HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | | |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | 2019-000000000016490 | TOYOTA PRADO TX-L D4D BVA SUV IN FAVOR OF THE HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | 0.00 | 80,324.35 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000016490 | TOYOTA PRADO TX-L D4D BVA SUV IN FAVOR OF THE HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | | 1,639.27 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment of Assorted Stationery Materials supplied MOT for the month of January 2019 | | 2,544.53 |
| XXXXXX/X/XX/XXX/XXXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | Payment of Assorted Stationery Materials supplied MOT for the month of January 2019 | | 51.93 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment of Assorted Stationery Materials supplied MOT for the month of January 2019 | | 841.05 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-00000000016591 | Payment of Assorted Stationery Materials supplied MOT for the month of January 2019 | 0.00 | 17.16 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | 2019-000000000016669 | TOYOTA PRADO TX-L D4D BVA SUV IN FAVOR OF THE HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES 8 | 0.00 | 80,749.41 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000016669 | TOYOTA PRADO TX-L D4D BVA SUV IN FAVOR OF THE HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | 0.00 | 1,647.95 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000016671 | Payment represent 51% completion for the asphalt pavement of neighboring road in ELWA community, Gbarnga Broad Street, Fair in Buchanan & Chugbor Road as Lot 5 | 0.00 | 620,928.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|--|--|------------|------------|
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000016671 | PAYMENT REPRESENT 51% COMPLETION FOR THE ASPHALT PAVEMENT OF NEIGHBORHOOD ROAD IN ELWA COMMUNITY,GBARNGA BROAD STREET FAIR GROUND IN BUCHANA & CHUGBOR ROAD AS LOT 5 | 0.00 | 12,672.00 |
| xxxxxxx/x/xxx/xxxx/xxxxx/xxxxx/xxxx/ | 415102 | 2019-000000000016688 | PAYMENT REPRESENT 51% COMPLETION FOR THE ASPHALT PAVEMENT OF NEIGHBORHOOD ROAD IN ELWA COMMUNITY,GBARNGA BROAD STREET FAIR GROUND IN BUCHANA & CHUGBOR ROAD AS LOT 5 | 0.00 | 413,902.42 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000016688 | PAYMENT REPRESENT 51% COMPLETION FOR THE ASPHALT PAVEMENT OF NEIGHBORHOOD ROAD IN ELWA COMMUNITY,GBARNGA BROAD STREET FAIR GROUND IN BUCHANA & CHUGBOR ROAD AS LOT 5 | 0.00 | 8,446.99 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000016721 | SA FORD EVEREST SUV IN FAVOR OF THE HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | | 91,725.04 |
| xxxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415105 | 2019-000000000016721 | SA FORD EVEREST SUV IN FAVOR HONORABLE MEMBERS OF THE HOUSE OF REPRESENTATIVES | 0.00 | 1,871.94 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | | 40% PART PAYMENT FOR 100% COMPLETION OF MAINTENANCE OF LOFA BRIDGE BETWEEN GRAND CAPE MOUNT AND GBARPOLU COUNTIES | 0.00 | 23,898.29 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 170114_000000000000000000000000000000000 | 40% PART PAYMENT FOR 100% COMPLETION OF MAINTENANCE OF LOFA BRIDGE BETWEEN | () ()() | 487.72 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|--------------------------------|---|--------|----------|
| | | | GRAND CAPE MOUNT AND GBARPOLU COUNTIES | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000016732 | Repair and Maintenance - Vehicles for the Month of Oct. '18 / CARI | | 1,170.12 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000016/32 | Repair and Maintenance - Vehicles for the Month of Oct. '18 / CARI | | 23.88 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | POLICE MATERIALS IN FAVOR LNP FOR THE MONTH OF DEC'018 | | 5,844.62 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | POLICE MATERIALS IN FAVOR LNP FOR THE MONTH OF DEC'018 | | 119.28 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | REPAIRS AND MAINTENANCE OF VEHICLE IN FAVOR OF LNP FOR THE MONTH OF DEC'018 | | 2,630.02 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000016754 | REPAIRS AND MAINTENANCE OF VEHICLE IN FAVOR OF LNP FOR THE MONTH OF DEC'018 | | 53.67 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000016757 | POLICE MATERIALS IN FAVOR LNP FOR MONTH OF NOV'018 | | 5,879.60 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000016/5/ | POLICE MATERIALS IN FAVOR LNP FOR MONTH OF NOV'018 | | 119.99 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | STATIONARY MATERIALS IN FAVOR LNP FOR THE MONTH OF NOV'018 | | 2,545.47 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-00000000016759 | STATIONARY MATERIALS IN FAVOR LNP FOR THE MONTH OF NOV'018 | 0.00 | 51.95 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000017058 | PAYMENT REPRESENTING THE COST OF SCRATCH CARD FOR THE MINISTRY OF MINES AND ENERGY. | 0.00 | 864.75 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019 <u>-</u> 0000000000017058 | PAYMENT REPRESENTING THE COST OF SCRATCH CARD FOR THE MINISTRY OF MINES | 0.00 | 17.65 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|--|--------|--------------|
| | | | AND ENERGY. | | |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | STATIONARY IN FAVOR LNP FOR THE MONTH OF DEC'018 | | 2,638.73 |
| xxxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxxx/xxxx/xxxx | 415105 | | STATIONARY IN FAVOR LNP FOR THE MONTH OF DEC'018 | | 53.85 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/xxxx | 415102 | | STATIONARY IN FAVOR LNP FOR THE MONTH OF OCT'018 | | 2,481.12 |
| xxxxxx/x/xx/xxx/xxxx/xxxxx/xxxxx/xxxx/xxxx | 415105 | 2019-00000000017350 | STATIONARY IN FAVOR LNP FOR THE MONTH OF OCT'018 | 0.00 | 50.64 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000017485 | Cost of vehicle repairs | 0.00 | 2,748.07 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000017485 | Cost of vehicle repairs | 0.00 | 9.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/XXXX | 415105 | 2019-000000000017485 | Cost of vehicle repairs | 0.00 | 24.00 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000017511 | Payment of Security Services Rendered to LISGIS for the months January and February 2019 | | 2,857.68 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415105 | 2019-000000000017511 | Payment of Security Services Rendered to LISGIS for the months January and February 2019 | 0.00 | 58.32 |
| xxxxxx/x/xx/xxx/xxxx/xxxxx/xxxxx/xxxx/xxxx | 415102 | 2019-00000000017526 | payment represents 25 pieces of tyres infavoar of nta/nov 2018 | | 2,998.80 |
| xxxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxxx/xxxx/xxxx | 415105 | 2019-000000000017526 | payment represents 25 pieces of tyres infavoar of nta/nov 2018 | | 61.20 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000017530 | payment for 15 pieces of heavy duty battery infavor of nta/feb 2018 | | 4,410.00 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/xxxx | 415105 | 2019-000000000017530 | payment for 15 pieces of heavy duty battery infavor of nta/feb 2018 | 0.00 | 90.00 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000017532 | Payment for 50% completion of work on the | 0.00 | 1,528,800.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|--|----------|------------|
| | | | Pipeline Road in Paynesville, Montserrado County | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000017532 | Payment for 50% completion of work on the Pipeline Road in Paynesville, Montserrado County | | 31,200.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | | FOREIGN MEANS OF TRAVEL IN FAVOR OF HON. DANIEL ZIANKAHN TO ABU DHABI. FEBRUARY 2019 | | 675.22 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000017613 | FOREIGN MEANS OF TRAVEL IN FAVOR OF HON. DANIEL ZIANKAHN TO ABU DHABI. FEBRUARY 2019 | 0.00 | 13.78 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment for fifty percent completion of work done on the pipeline road in Paynesville | | 548,878.65 |
| XXXXXX/X/XX/XXX/XXXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000017729 | Payment for fifty percent completion of work done on the pipeline road in Paynesville | 0.00 | 11,201.60 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000017781 | PART PAYMENT FOR THE PURCHASE OF 1010 BAGS OF RICE AS CHRISTMAS BOUNS FOR MOE STAFF. | | 20.00 |
| xxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415105 | 2019-000000000017781 | PART PAYMENT FOR THE PURCHASE OF 1010 BAGS OF RICE AS CHRISTMAS BOUNS FOR MOE STAFF. | | 2.20 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000017781 | PART PAYMENT FOR THE PURCHASE OF 1010 BAGS OF RICE AS CHRISTMAS BOUNS FOR MOE STAFF. | | 111.12 |
| XXXXXX/X/XX/XXX/XXXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-00000000017860 | Reversal Expense Voucher 2019- 00000000017714 | 2,047.22 | 0.00 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000017860 | FOREIGN MEANS OF TRAVEL FOR HON. | 41.78 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|--|--------|-----------|
| | | | DANIEL D. ZIANKAHN TRIP TO ISRAEL , FEBRUARY 2019 | | |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000017861 | Reversal Expense Voucher 2019- 00000000017613 | 675.22 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000017861 | FOREIGN MEANS OF TRAVEL IN FAVOR OF HON. DANIEL ZIANKAHN TO ABU DHABI. FEBRUARY 2019 | 13.78 | 0.00 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415102 | 2019-000000000017876 | MOD PAYMENT FOR MORTUARY SERVICES, MARCH 2019 | | 2,234.20 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000017876 | MOD PAYMENT FOR MORTUARY SERVICES, MARCH 2019 | 0.00 | 45.60 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000017938 | REPAIRS AND MAINTENANCE-GENERATORS IN FAVOR AIBT FOR THE MONTH OF SEPT-OCT'018 | | 670.32 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000017938 | REPAIRS AND MAINTENANCE-GENERATORS IN FAVOR AIBT FOR THE MONTH OF SEPT-OCT'018 | 0.00 | 13.68 |
| XXXXXXX/X/XXX/XXXXXXXXXXXXXXXXXXXXXXXX | 415102 | 2019-00000000018010 | MOD PAYMENT FOR AFL DRY RATION, FEBRUARY 2019 | | 37,677.41 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-00000000018010 | MOD PAYMENT FOR AFL DRY RATION, FEBRUARY 2019 | | 768.93 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-00000000018012 | MOD PAYMENT FOR AFL DRY RATION, JANUARY 2019 | | 37,677.41 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-00000000018012 | MOD PAYMENT FOR AFL DRY RATION, JANUARY 2019 | 0.00 | 768.93 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000018236 | Supply and delivery of traffic lights | 0.00 | 35,586.45 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000018236 | Supply and delivery of traffic lights | 0.00 | 726.25 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|--|-----------|-----------|
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000018679 | Payment for assorted office materials | 0.00 | 420.97 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-00000000018679 | Payment for assorted office materials | 0.00 | 6.40 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000018683 | Payment for vehicle spare parts | 0.00 | 1,458.92 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000018683 | Vehicle spare parts | 0.00 | 5.60 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000018683 | Payment for vehicle spare parts | 0.00 | 7.79 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000018683 | Payment for vehicle spare parts | 0.00 | 16.38 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | 2019-000000000018684 | Payment for vehicle spare parts | 0.00 | 2,188.53 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000018684 | Vehicle spare parts | 0.00 | 8.40 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000018684 | Payment for vehicle spare parts | 0.00 | 11.69 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000018684 | Payment for vehicle spare parts | 0.00 | 24.58 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | | Payment for the procurement of SAP 2016 Crystal Report Software -License to be used by the EDP Liberian Dollar Check Writing Unit of the MFDP to generate reports, Dept. of Fiscal Affairs in favor of United Office Supplies & Equipment | 0.00 | 323.40 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | | Payment for the procurement of SAP 2016 Crystal Report Software -License to be used by the EDP Liberian Dollar Check Writing Unit of the MFDP to generate reports, Dept. of Fiscal Affairs in favor of United Office Supplies & Equipment | 0.00 | 6.60 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | WITHHOLDING TAX PAYABLE 2% FROM JAN 1 - FEB 28,2019 | | 13,709.78 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000020006 | WITHHOLDING TAX PAYABLE 2% FROM JAN 1 - FEB 28,2019 | 13,709.78 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|---|--------|------------|
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | 2019-000000000020054 | Payment to activa international insurance company for the use of medical expenses infavor of LNCSA for third quarter | | 2,601.90 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020054 | Payment to activa international insurance company for the use of medical expenses infavor of LNCSA for third quarter | | 53.10 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | 2019-000000000020093 | 50% completion of work done on the Bardnerville - Tusa Field (2.6km) and Bardnerville - New Georgia Gulf (2.3km) under the Public Sector Program | 0 00 | 345,718.31 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000020093 | 50% completion of work done on the Bardnerville - Tusa Field (2.6km) and Bardnerville - New Georgia Gulf (2.3km) under the Public Sector Program | 0 00 | 7,055.48 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020159 | Repair and maintenance of MOS vehicles | 0.00 | 5,877.06 |
| XXXXXXX/X/XX/XXXX/XXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000020159 | Repair and maintenance of MOS vehicles | 0.00 | 119.94 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020160 | Repair and maintenance of MOS vehicles | 0.00 | 3,918.04 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020160 | Repair and maintenance of MOS vehicles | 0.00 | 73.72 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020162 | Repair of MOS vehicles | 0.00 | 3,887.46 |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000020162 | Repair of MOS vehicles | 0.00 | 66.50 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | 40% Security Guard Services for July '18 - Feb. '19 / LPGMC | | 4,170.15 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020206 | 40% Security Guard Services for July '18 - Feb. '19 / LPGMC | | 85.11 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000020279 | Vehicle Spare Parts Supplied the EPS for the months of February and March 2019 | 0.00 | 13,669.24 |
| XXXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/XXXX | 415105 | 2019-000000000020279 | Vehicle spare parts supply the EPS for the | 0.00 | 278.96 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|--|-----------|----------|
| | | | month(s) of February and March 2019 | | |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020323 | Reversal Expense Voucher 2019- 00000000019656 | 10,670.24 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020323 | Payment of air ticket in favor of Gbehzohngar M. Findley, Minister of Foreign Affairs who traveled to Ne York, USA to address the 49th Session of Commission of the Limits of Continental Shelf and also traveled to UAE from March 2-15, 2019 | 217.76 | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020439 | Payment for the procurement of Four (4) drawer cabinet & a safe to be used by the Procurement Unit of the MFDP in favor Office Ideas | | 145.04 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020439 | Payment for the procurement of Four (4) drawer cabinet & a safe to be used by the Procurement Unit of the MFDP in favor Office Ideas | | 2.96 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020447 | Payment for the procurement of Two (2) laptops & One (1) printer to be used in the Integrity & Professional | | 1,009.40 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020447 | Payment for the procurement of Two (2) laptops & One (1) printer to be used in the Integrity & Professional | | 20.60 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020451 | | , | 0.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020451 | PAYMENT REPRESENT 51% COMPLETION FOR THE ASPHALT PAVEMENT OF NEIGHBORHOOD | 12,672.00 | 0.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|---|------------|------------|
| | | | ROAD IN ELWA COMMUNITY,GBARNGA BROAD STREET FAIR GROUND IN BUCHANA & | | |
| | | | CHUGBOR ROAD AS LOT 5 | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000020454 | Reversal Expense Voucher 2019- 00000000016180 | 705,600.00 | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000020454 | PAYMENT FOR 50% COMPLETION OF 5KM NEIGHBORHOOD ROAD IN ELWA REHAB COMMUNITY | | 0.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/XXXX | 415102 | 2019-000000000020456 | Equipment | 0.00 | 303.80 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000020456 | Payment for the procurement of One (1) set of 24000 BTU Split Unit/Air Conditioner to be used in the Deputy Minister for Budget office of the MFDP in favor of United Office Supplies & Equipment | | 6.20 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | 2019-000000000020459 | Payment for the procurement of One (1) set of 24000 BTU Split Unit/Air Conditioner to be used in the Deputy Minister for Budget office of the MFDP in favor of United Office Supplies & Equipment | | 499.80 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000020459 | Payment for the procurement of One (1) set of 24000 BTU Split Unit/Air Conditioner to be used in the Deputy Minister for Budget office of the MFDP in favor of United Office Supplies & Equipment | | 10.20 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000020483 | Payment representing for 51% completion for the asphalt and concrete pavement of neigbhoring roads in ELWA Community, | | 310,464.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|---|--------|------------|
| | | | Gbarnaga Broad Street, Fair Ground in | | |
| | | | Buchanan City and Chugbor road | | |
| | | | Payment representing for 51% completion for | | |
| | | | the asphalt and concrete pavement of | | |
| XXXXXX/X/XX/XXX/XXXXX/XXXXX/XXXX/XXXX/ | 415105 | | neigbhoring roads in ELWA Community, | 0.00 | 6,336.00 |
| | | | Gbarnaga Broad Street, Fair Ground in | | |
| | | | Buchanan City and Chugbor road | | |
| | 415102 | | Payment for 50% completion of concrete | | 252 000 00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | pavement of 5km of neighboring road in ELWA | 0.00 | 352,800.00 |
| | | | Rehab Community in Monrovia Payment for 50% completion of concrete | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | pavement of 5km of neighboring road in ELWA | | 7,200.00 |
| | 413103 | | Rehab Community in Monrovia | 0.00 | 7,200.00 |
| | | | Payment for design review and construction | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | | 0.00 | 100,404.13 |
| | | | Montserrad | | |
| | | | Payment for design review and construction | | |
| XXXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000020560 | supervision of neighbourhood roads in | 0.00 | 2,049.06 |
| | | | Montserrad | | |
| | | | Payment for design review and construction | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000020562 | supervision of neighbourhood roads in | 0.00 | 150,617.38 |
| | | | Montserrad | | |
| | | | Payment for design review and construction | | |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | , , | 0.00 | 3,073.82 |
| | 11-10- | | Montserrad | | 20.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXX/XXXX/XXXX/ | 415105 | | 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | | 29.93 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000020567 | payment for assorted roofing materials | 0.00 | 29.53 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|----------------------|---|--------|------------|
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000020569 | payment for assorted roofing materials | 0.00 | 4,380.60 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000020569 | payment for assorted roofing materials | 0.00 | 44.40 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment as vehicles Insurance for the ministry of Commerce & Industry. | | 2,881.95 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000020739 | Payment as vehicles Insurance for the ministry of Commerce & Industry. | | 58.82 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020783 | attached proforma | | 4,116.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020783 | attached proforma | | 4.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000020785 | attacheu proforma | | 2,641.44 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000020785 | מנומכוזכע טוטוטווומ | 0.00 | 53.91 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | | Payment for Sewage for six(6)months July to Dec. 2018. | | 367.30 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415105 | | Payment for Sewage for six(6)months July to Dec. 2018. | | 7.50 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | | Second & third payment for the completion of 205 housing unit in Gilbrata community | | 294,000.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415105 | | Second & third payment for the completion of 205 housing unit in Gilbrata community | | 6,000.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | | Food and catering for the month of February 2019 KRTTI | | 1,193.45 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000021967 | Food and catering for the month of February 2019 KRTTI | 0.00 | 24.36 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000021973 | AFL DRY RATION, MARCH 2019 | 0.00 | 56,518.56 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|--|--------|-----------------------|--|--------|----------|
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000021973 | AFL DRY RATION, MARCH 2019 | 0.00 | 1,153.44 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000022381 | Payment for Insurance of Vehicles VPO, 2019. | 0.00 | 3,339.60 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000022381 | Payment for Insurance of Vehicles VPO, 2019. | 0.00 | 68.15 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000022642 | Cleaning Materials for the month of November, 2018 | | 1,063.04 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000022642 | Cleaning Materials for the month of November, 2018 | | 21.69 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000022660 | Payment of assorted cleaning materials in favor of the Ministry of Foreign Affairs. | | 351.40 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000022660 | Payment of assorted cleaning materials in favor of the Ministry of Foreign Affairs. | 0.00 | 7.17 |
| xxxxxx/x/xx/xxx/xxxx/xxxxx/xxxx/xxxx/ | 415102 | 2019-000000000022697 | Payment represents the cost for assorted generator spare parts supplied during the Month of March, 2019 | | 1,719.12 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000022697 | Payment represents the cost for assorted generator spare parts supplied during the Month of March,2019 | | 35.08 |
| xxxxxxx/x/xx/xxx/xxxxx/xxxxx/xxxx/xxxx/ | 415102 | 2019-000000000022850 | Payment represents the cost of assorted building material supplied during the Month of March, 2019 | | 3,920.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000022850 | Payment represents the cost of assorted building material supplied during the Month of March, 2019 | | 80.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-0000000000022871 | Payment for the repair & maintenance of MFDP's 810KVA Perkins generator which is used as backup for the MFDP in favor Beever Company Inc | 0.00 | 1,618.96 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|--|--------|-----------|
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | | Payment for the repair & maintenance of MFDP's 810KVA Perkins generator which is used as backup for the MFDP in favor Beever Company Inc | 0.00 | 33.04 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | Cost of Stationery supplies for the months August to October, 2018 | | 20.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000023021 | Cost of Stationery supplies for the months August to October, 2018 | | 15.80 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000023028 | Vehicle Spare Parts for the months of March, April & May 2019 | | 23,594.09 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | Vehicle Spare Parts for the months of March, April & May 2019 | | 481.51 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Drugs and Medical Consumables for MOJ for the months of August to December, 2018 | | 927.18 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000023031 | Drugs and Medical Consumables for MOJ for the months of August to December, 2018 | 0.00 | 18.92 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000023039 | MONTHS AUGUST - OCTOBER 2018 | 0.00 | 1,774.19 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000023039 | COST OF STATIONERY SUPPLIES FOR THE MONTHS AUGUST - OCTOBER 2018 | 0.00 | 36.21 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | 2019-000000000023945 | Payment for assorted vehicle repair materials. | 0.00 | 356.71 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000023945 | Payment for assorted vehicle repair materials. | 0.00 | 7.28 |
| xxxxxxx/x/xxx/xxxx/xxxxx/xxxxx/xxxx/ | 415102 | 2019-000000000024196 | 60% payment as cost for the expansion of the Closed Circuit Television (CCTV) additional coverage of offices and areas of the MFDP in favor of Mwetana Consulting & Technology Group | | 13,805.06 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|--|--------|----------|
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000024196 | 60% payment as cost for the expansion of the Closed Circuit Television (CCTV) additional coverage of offices and areas of the MFDP in favor of Mwetana Consulting & Technology Group | 0.00 | 281.74 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Servicing materials of 250KVA and 500KVA generators at MOS from Oct. 20- Nov. 19, 2018 | | 919.24 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | Servicing materials of 250KVA and 500KVA generators at MOS from Oct. 20- Nov. 19, 2018 | | 18.76 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415102 | | Payment for cleaning materials for the use of LISGIS. | | 588.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | | Payment for cleaning materials for the use of LISGIS. | | 12.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415102 | | Payment for cleaning materials for the use of LISGIS. | | 341.29 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000024296 | Payment for cleaning materials for the use of LISGIS. | 0.00 | 6.97 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415102 | 2019-000000000024713 | Assorted Stationery Items in favor of the House of Representatives for the Month of November 2018 | | 5,879.82 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXXX/ | 415105 | 2019-000000000024713 | Assorted Stationery Items in favor of the House of Representatives for the Month of November 2018 | | 120.00 |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/ | 415102 | 2019-000000000024716 | Assorted Stationery items in favor of the House of Representatives for the Month of November 2018 | | 8,820.00 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/XXXX | 415105 | 2019-000000000024716 | Assorted Stationery items in favor of the House | 0.00 | 180.00 |



| CODING BLOCK | | SOURCE DOCUMENT NO. | DESCRIPTION | DEBITS | CREDITS |
|---|--------|----------------------|--|--------|-----------|
| | | | of Representatives for the Month of November 2018 | | |
| XXXXXXX/X/XXX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | | Payment for Repair and Maintenance -Civil for the month of November 2018 | | 3,656.53 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000024802 | Payment for Repair and Maintenance -Civil for the month of November 2018 | 0.00 | 74.62 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000024820 | Stationery | 0.00 | 39.50 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000024820 | Stationery | 0.00 | 39.50 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000024830 | Stationery | 0.00 | 1.79 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000024830 | Stationery | 0.00 | 13.82 |
| xxxxxx/x/xx/xxx/xxxx/xxxxx/xxxx/xxxx/ | 415102 | 2019-000000000025008 | Payment represents the cost for assorted cleaning materials supplied during the Month of march, 2019 | | 1,965.88 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/ | 415105 | 2019-000000000025008 | Payment represents the cost for assorted cleaning materials supplied during the Month of march, 2019 | | 28.00 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000025272 | Payment of agriculture supplies & inputs | 0.00 | 63,010.08 |
| XXXXXXX/X/XX/XXXX/XXXXXX/XXXXX/XXXXX/XXXX | 415105 | 2019-000000000025272 | Payment of agriculture supplies & inputs | 0.00 | 1,285.92 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415102 | 2019-000000000025387 | Igenerator | 0.00 | 1,617.00 |
| XXXXXXX/X/XXX/XXXX/XXXXX/XXXXX/XXXX/XXXX | 415105 | 2019-000000000025387 | Supply of one power wizard blade for MOS generator | 0.00 | 33.00 |
| XXXXXXX/X/XX/XXX/XXXXXXXXXXXXXXXXXXXXX | 415102 | 2019-000000000026508 | Repair & Maintenance of MOS vehicles | 0.00 | 5,755.34 |
| XXXXXX/X/XX/XXX/XXXXXX/XXXXX/XXXX/XXXX/ | 415105 | 2019-000000000026508 | Repair & Maintenance of MOS vehicles | 0.00 | 117.46 |

