



## BANK OF MAURITIUS

website: <https://www.bom.mu>

### INVITATION FOR BIDS

#### Cash Dealers Monitoring System

#### **Extension of Deadline and Responses provided at Pre-bid Meeting**

1. With reference to the Communiqué issued by the Bank of Mauritius (Bank) on 24 October 2012, a pre-bid meeting was held at 11:00 hours on Tuesday 20 November 2012.
2. The responses provided by the Bank to the queries of the bidders at the pre-bid meeting are annexed herewith.
3. The closing date for the submission of bids has been extended to **Friday 28 December 2012 at 15:00 hours (Local Time)**.

**Bank of Mauritius**

**7 December 2012**



## Cash Dealers Monitoring System

**The Bank of Mauritius held a pre-bid meeting on 20 November 2012 in respect of the invitation for bids for the development, testing and implementation of a Cash Dealers Monitoring System (CDMS). The responses provided by the Bank to the queries raised are as follows:**

1. There are currently 16 cash dealers (10 Money Changers and 6 Foreign Exchange Dealers) licensed by the Bank of Mauritius. The list of Cash Dealers can be downloaded from the Bank's website (<https://www.bom.mu>) under the heading "Authorised Financial Institutions".
2. Bidders requested for the average and maximum number of transactions per cash dealer. *The information has been collected from cash dealers and provided at Annex 1 as an indication for the scale of the transactions to be processed by the system.*
3. Bidders also requested information on the IT systems used by Cash Dealers. *Annex 2 outlines the relevant information.*
4. The Front End Trading System (FETS) refers to the system used by Cash Dealers to record their transactions. The FETS does not fall in the scope of the RFP. The Security Reporting Module (SRM) pull data from the FETS. Alternatively, the FETS will push data to the SRM at regular intervals and transmit them to the Central Repository of Transactions (CRT). The SRM will be located at the premises of the Cash Dealers on their existing server or on a separate server to be provided by the Cash Dealers. The CDMS, which will be housed at the Bank, must be able to consolidate all data captured from the FETS onto a single platform.
5. In general, Cash Dealers are required to set up their own FETS. Section 10 of the Terms and Conditions for the authorisation to carry on the business of money-changer and section 12 of the Terms and Conditions for the authorisation to carry on the business of foreign-exchange dealer require Cash Dealers to submit, as and when required, on-line data to the Bank in a specified format.
6. In general, all transactions carried out at the branches of Cash Dealers are centralised at the Head-Office, where reports are prepared and consolidated before submission to the Bank. The CDMS will collect information directly from the Head Office. The system must be able to identify the branches where the transactions have been conducted.

7. The CDMS must be able to generate customised reports as required. The format of the data that need to be collected from the Cash Dealers is given in section R4.1.11 of the Request For Proposal.
8. The CDMS shall capture all transactions carried out by individual Cash Dealers in a sequential order, including information on Know Your Client profiles of customers in accordance with the thresholds established by the Guidance Notes on Anti-Money Laundering and Combating the Financing of Terrorism (AML-CFT) for Financial Institutions (a copy of which can be downloaded from the Bank's website). In addition, the system shall include a blacklist from which it can identify suspicious transaction. The AML-CFT module shall flag suspicious transactions. The handling of suspicious transaction is, however, out of the scope of the system.
9. The data pulled from or pushed into the SRM should not be tampered with and Cash Dealers must provide a control to ensure that all transactions in the FETS are exported to the SRM. Dealers must provide a means to control whether data have been tampered with and all transactions in the FETS are exported to the SRM.
10. The Bank currently uses the Oracle database. However, the Bank is opened to other proposals with regards to the database management system.
11. Encryption/Public Key Infrastructure may be used to secure communication. Accordingly, a certification institution exists in Mauritius for PKI infrastructure and can be used in the project.
12. Financial institutions are required to retain data for a period of 7 years. Data may be purged but should be available in back-up tapes or other storage media.
13. Files can be uploaded in a folder of the SRM which will be accessed by the system. The Cash Dealers may obtain feedback from file deposited in some folder by the SRM. For that purpose, the SRM should generate an acknowledgement file in the same folder.

**Bank of Mauritius**

**7 December 2012**

## **Annex 1**

Foreign exchange transactions per Cash Dealer during the period 1 July 2011 to 30 June 2012 is provided below and include money changing transactions, money transmission and foreign exchange dealings.

	<u>No. of transactions</u>
1. Daily average	495
2. Peak in a day	992

**Bank of Mauritius**

**7 December 2012**

## **Annex 2**

**Relevant details on the IT systems used by the Cash Dealers are provided below.**

### **Company A**

**2.1 Which computer system (software) is currently being used to record the transactions?**

Money eXchange System

**2.2 How are branches connected to the Head Office?**

Branches and HeadOffice are connected to a Database Server through Internet-ADSL  
The Database Server is in the Premises of the Head Office.

**2.3 How and at what frequency is data transferred from the branch to Head Office?**

Data are residing in Database Server (Head.Office) and are online.

**2.4 Are transactions recorded at the branch consolidated at the Head Office?**

Yes and Online.

**2.5 Please provide details of the hardware, operating system, application system and network used in your company.**

Client-PC : 1GHz or Higher, 2GB RAM, 80GB Hard Disk, Windows XP/7

Network : LAN within the Branch/Head-Office. 512KB ADSL Line or Higher for Branch Online Connectivity

Server : 2GHz or Higher, 4GB RAM, 120GB Hard Disk or Higher, Windows XP/7/2003/2008

### **Company B**

**2.1 Which computer system (software) is currently being used to record the transactions?**

MCHANGE IMPLEMENTED BY NETWARE SERVICES LTD

**2.2 How are branches connected to the Head Office?**

NO BRANCH

**2.3 How and at what frequency is data transferred from the branch to Head Office?**

NIL

**2.4 Are transactions recorded at the branch consolidated at the Head Office?**

NIL

**2.5 Please provide details of the hardware, operating system, application system and network used in your company.**

PERSONAL COMPUTER,

WINDOWS XP PRO

WINDOWS 7 PRO

TAILOR MADE SYSTEM

LAN/WIRELESS

### **Company C**

**2.1 Which computer system (software) is currently being used to record the transactions?**

M.CHANGE SYSTEM

**2.2 How are branches connected to the Head Office?**

VIA WINDOW TERMINAL SERVER (INTERNET)

- 2.3 **How and at what frequency is data transferred from the branch to Head Office?**  
WORK DIRECTLY THROUGH TERMINAL SERVER. (WORK ON LINE)
- 2.4 **Are transactions recorded at the branch consolidated at the Head Office N/A ( WORKING ON LINE )**  
HARDWARE : ML 310, SERVER XEON , PROCESSOR 2 X 500 GB HARD DISK, RATE 0
- 2.5 **Please provide details of the hardware, operating system, application system and network used in your company.**  
OPERATING SYSTEM : WINDOW SERVER 2003
- APPLICATION SYSTEM & NETWORK : M.CHANGE SYSTEM , REMOTE DESKTOP SERVICES  
LOCAL AREA NETWORK

#### **Company D**

- 2.1 **Which computer system (software) is currently being used to record the transactions?**  
ForEx Software. A tailor made application software
- 2.2 **How are branches connected to the Head Office?**  
Branches are linked to Head Office by SHDSL connection (service provider: Mauritius Telecom)
- 2.3 **How and at what frequency is data transferred from the branch to Head Office?**  
Tellers access the ForEx software to process any particular transaction and all details pertaining to the said transaction are recorded on a real time basis on the main server of the Company (located at the Head Office) at the time that the transaction is validated.
- 2.4 **Are transactions recorded at the branch consolidated at the Head Office?**  
Yes. Refer to 2.3 response
- 2.5 **Please provide details of the hardware, operating system, application system and network used in your company.**
- i) Hardware**
- Server - *HP DL 380 Server G8*  
(*2P-6Core Xeon E5-2620, 16GB, 4x300GB SAS, DVD RW, 4xGbE ports, Red PSU*)
  - Back up server - *HP Proliant ML370 G5*
  - Remote Redundancy server - *Intel QuadCore*
  - End users - *PCs (Pentium IV, Pentium Dual Core & Core2Duo)*  
- *Laptop (Dell MM061 & Toshiba L300)*
- ii) Operating System**
- Server - *Windows Server Enterprise 2008 R2/ Windows Server 2003 Standard*
  - Back up server - *Windows Server Enterprise 2008 R2*
  - Remote Redundancy server - *Windows Server 2008 R2*
  - End users - *MsWinXP*

### **iii) Application System**

MsOffice applications: *Word 2003/2007, Excel 2003/2007, Outlook 2003/2007*

Mail server application: *Linux Webmin v1.590*

Transaction application: *ForEx Software*

Database: *Centralised database MsSQL 2000*

Reporting application: *Crystal Reports (BoM Report & Compliance Exception Reports)*

### **iv) Network Infrastructure**

Head Office servers and users are interconnected by a meshed LAN

Users at branch level are linked by a WAN connection to the main office

## **Company E**

### **2.1 Which computer system (software) is currently being used to record the transactions?**

Money Changer arm                      informix

Forex arm                                  Access, JD Edwards

### **2.2 How are branches connected to the Head Office?**

the money changer branch connects to the Head Office via a lease line provided by Mauritius Telecom.

The data base server is located behind a firewall.

### **2.3 How and at what frequency is data transferred from the branch to Head Office?**

Daily basis

### **2.4 Are transactions recorded at the branch consolidated at the Head Office?**

Yes

### **2.5 Please provide details of the hardware, operating system, application system and network used in your company.**

The Company uses the Oracle JD Edwards Enterprise Resources Planning ("ERP")

software in terms of its primary accounting system and the IBM Lotus Domino platform as its messaging system.

Both applications are hosted, maintained and supported remotely at Company's ITES services provider's site

and are accessed through optic fibre cables. Back end is Microsoft SQL Server and Windows Enterprise

Operating System for JDE, IBM proprietary database and Linux Operating System for Lotus Domino.

Both applications currently run on HP server and storage technologies with VMWare in terms of virtualisation

software. The database of those two systems are replicated onto a secondary site which caters for enhanced

redundancy and high availability. Moreover, tape backup is carried out daily on the basis of a two weeks

roll-over procedure. The Company also utilises the MS Access application software in terms of its transactions recording and reporting . This application is hosted locally within the premises of the Company.

**Level 1 end user support is managed through a co-sourcing arrangement between the Client and its service provider. Level 2 and 3 support go through the service provider's helpdesk which is tasked to follow up on issues until their complete resolution.**

### **Server Infrastructure**

The database server details are as follows:

Make and model:    HP Proliant 570G3

Operating System:    RedHat Enterprise Linux 4.0

Database engine:    Informix IDS 10.00

### **Client Infrastructure and software**

The front end trading application used to record dealings transactions runs on a PC and

has been developed in Visual Basic 6.0. All transaction data resides on the database server at Head office.

The front end trading application is maintained by company itself.

## Company F

**2.1 Which computer system (software) is currently being used to record the transactions?**

EXCHANGE ON NET (EON)- Front Office Software

**2.2 How are branches connected to the Head Office?**

SHDSL line provided by MT

**2.3 How and at what frequency is data transferred from the branch to Head Office?**

Server being at HO, all transactions are recorded at HO, real time.

**2.4 Are transactions recorded at the branch consolidated at the Head Office?**

YES

**2.5 Please provide details of the hardware, operating system, application system and network used in your company.**

Details provided below

Head Office Network Infrastructure:

- 45 users connected to Data Server
- 1 MB ADSL line for HO users
- 2 MB SHDSL line for inter-branch connectivity
- 2 MB ADSL line for branches internet access

We have a Domain Controller server, on which Active Directory is running;

Branches are connected through a 2 MB SHDSL Line to the HO and this ensures inter-branch connectivity.

Branch Setup

- 18 branches connecting to HO
- 192 kbps SHDSL line to HO per branch
- 2 PCs per Branches

Server Infrastructure:

1. Fujitsu Econel Server

Intel Pentium D CPU

3.00 Ghz, 4GB RAM

Windows Server 2003 Standard SP2

**Role:**

Domain Controller Server – Active Directory

File Server

2. IBM EServer Xseries 346

Intel Xeon CPU

3.20 Ghz, 4GB Ram

OS used:

1. Windows 7
2. Windows Vista
3. Windows XP
4. Windows Server 2003 Standard Edition
5. Windows Server 2008 Standard Edition Without Hyper-V



Office Suite used:

1. MS Office 2003 Pro OEM
2. Ms Office 2007 Pro OEM

Mail Server Software:

The company is hiring email addresses with Mauritius Telecom but plans to implement an Exchange Server during this semester.

Software Application used:

1. Exchange on Net FOS

Supplier: Maraekat Infotech Pvt Ltd,  
110, East West Centre, Kurla-Andheri Road,  
Mumbai – 400 072

Type of Database: Microsoft SQL Server 2000

Linkage with Head Office

Future Projects:

Phase 1:

IT System and Data Security

(Implementation & Parallel Testing)

1. [Upgrade Domain Controller for Local Users of Head Office](#)
2. [Setting up of two backup storage device, one at the Head Office and the other one in Chemin Grenier](#)
3. [Setting Up of SWIFT system](#)
4. [Implementation of Firewall & IPS device](#)
5. [Antivirus and Antispyware for Branches](#)

## Company G

- 2.1 **Which computer system (software) is currently being used to record transactions in house software -**  
ACCESS DATABASE
- 2.2 **How are branches connected to the Head Office?**  
Wireless
- 2.3 **How and at what frequency is data transferred from the branch to Head Office?**  
250k
- 2.4 **Are transactions recorded at the branch consolidated at the Head Office?**  
Yes can be
- 2.5 **Please provide details of the hardware, operating system, application system and network used in your company**  
Windows 2000, 4gb normal PC's, network windows

## Company H

- 2.1 **Which computer system (software) is currently being used to record the transactions?**  
Forex Transaction System
- 2.2 **How are branches connected to the Head Office? Not applicable**  
(No branches)
- 2.3 **How and at what frequency is data transferred from the branch to Head Office?**  
Data is transferred on printed sheets from the Airport Counter on a weekly basis
- 2.4 **Are transactions recorded at the branch consolidated at the Head Office?**  
No, the system already provides the tools to consolidate data

**2.5 Please provide details of the hardware, operating system, application system and network used in your company.**

Server: Dual Core, Server 2000, Forex Transaction System(Admin)

Till: Core 2 Duo, Windows XP, Forex Transation System (Till)

**Company I**

**2.1 Which computer system (software) is currentely being used to record the transactions?**

Money eXchange Software System

**2.2 How are branches connected to the Head Office?**

ADSL

**2.3 How and at what frequency is data transferred from the branch to Head Office?**

Online and Real Time

**2.4 Are transactions recorded at the branch consolidated at the Head Office?**

Yes

**2.5 Please provide details of the hardware, operating system, application system and network used in your company.**

Hardware - DELL OPTIPLEX 380

Operasating System- WINDOWS XP

Network LAN & ADSL

**Company J**

**2.1 Which computer system (software) is currentely being used to record the transactions?**

Money Changing Transactions : EON [Exchange on Net]

Money Transmission : [Instant Cash Global Money Transfer] Web based Application {See Note 1 }

Foreign Exchange Dealings : Centralised at our Head Office [See Note2]

**2.2 How are branches connected to the Head Office?**

SHDSL (Private WAN)

**2.3 How and at what frequency is data transferred from the branch to Head Office?**

Realtime

**2.4 Are transactions recorded at the branch consolidated at the Head Office?**

Yes

**2.5 Please provide details of the hardware, operating system, application system and network used in your company.**

Server : Hp proliant DL 380 G3

Intel xeon cpu 2.80Ghz (2 CPUs)

Memory : 4Gb

OS : Windows 2003 Small Business Server

Application: MSSQL server

Network : Branches connecting to Head Office (2Mbps) via SHDSL 192kbps

**NOTE 1:**

Instant Cash Global Money Transfer [Money Transmission Transactions] supports a web-based application. The main site is maintained by Wallstreet Exchange Centre LLC in UAE. All branches access the application via the internet through a Username & Password. The Head Office with an Admin Password access the same application through the internet to generate reports. All reports deliver in real-time transaction figures.

**NOTE 2:**

Application for Foreign Exchange Dealings are made at our branches which are processed only at our Head Office.