ESCIMS
Excise Supply Chain Information Management System

DEPARTMENT OF EXCISE, ENTERTAINMENT AND LUXURY TAX, GOVERNMENT OF NCT, DELHI

Standard Operating Procedure
For
Private Vends

ESCIMS

About this Document

Purpose

The purpose of this document is to provide details of the specifications for Private Vend readiness and technical recommendations as per the project requirements.

Intended Audience

Private vends under advice from Delhi Excise will be using this document for implementation of ESCIMS at their premises for procurement and sale of liquor.

Table of Content

Acronyms and Abbreviation

S. No.	Abbreviation	Description
1.	ESCIMS	Excise Supply Chain Information Management System
2.	HHT	Hand Held Terminal
3.	IA	Implementation Agency
4.	ICT	Information and Communication Technology
5.	POS	Point Of Sale
6.	SOP	Standard Operating Procedure
6.	WAN	Wide Area Network

1. Introduction

Delhi Excise Department, Government of National Capital Territory of Delhi, proposes to initiate 'Excise Supply Chain Information Management System' (referred as ESCIMS throughout the document) in order to automate and regulate liquor sale in Delhi. The objective of ESCIMS is to make the system more transparent, efficient, effective and accountable with the help of Information & Communication Technology (ICT). The project covers the Excise services at Department and Corporations, Bonded Warehouses, Vends and Distilleries. The system shall prevent any leakage and provide real time information to the excise department. The system should enable the department to track the source of each bottle that is sold at vends in Delhi.

The objective of this document is to suggest approach, indicate relevant technology and process details for implementation of ESCIMS solution at Private Vends.

1.1 Objectives of ESCIMS

The Delhi Excise Department envisages following objectives to be met through the ESCIMS solution:

- To enforce and regulate liquor trade in Delhi without promoting it
- To mobilize revenue generation under the multiple heads of taxation that it administers.

1.2 Benefits from ESCIMS

The benefits expected out of ESCIMS implementation are:

- Reduction in smuggling and brand pushing of liquor which will help in better revenue mobilization.
- Automation of the issue of Transport Permits, Import permits, No Objection Certificates thereby making the deliverables predictive and measurable and introducing transparency in the process.
- Generation of timely, intelligent reports and comparisons will help managerial control, inventory management, improved efficiency and enabling of revenue record reconciliation on daily basis. Also bringing department's float to zero simultaneously. This will also help in flattening of tax cycle.
- Ease of tax rates or regulatory changes being put in force.

1.3 Benefits for Private Vends

Private Vends shall also be benefited from this system as:

- Private Vends can apply license online and track its status.
- Private Vends can apply purchase order, make payments online and check the status of purchase order.
- Better control over inventory is achieved.
- Prevention of illicit liquor sale.
- Reliability and efficiency in delivery is achieved.

1.4 Outcomes from ESCIMS

The outcomes expected out of ESCIMS are:

- Assessment of Excise duty to be paid/paid in real time
- Online MIS system for prompt and efficient decision making
- Online availability of allocation, sales and payments related information
- Transport of liquor within defined service levels
- Ease of payment of fees for Vend owner.
- An effective grievance redressal mechanism by providing a helpline/call centre function with single seat in 2 shifts

- Online status tracking and enquiry facility
- Ensuring the genuine and correct amount of liquor reach the citizen.

1.5 Implementation Agency

Tata Consultancy Services (TCS) has been selected as implementation agency (IA) for ESCIMS. The Implementation Agency is responsible for System Integration of all Excise Department functional areas. Procurement, installation and commissioning of hardware & software, application development, operation and maintenance support is under the scope of TCS for ESCIMS and point of sale application for corporation vends. **The scope excludes provision of infrastructure capabilities to Private Vends but Point of Sale (POS) application will be provided by Delhi Excise at Private vends.**

1.6 Scope

The scope of this document is to provide details of the infrastructure recommendations for successful deployment of ESCIMS solution at private vends. Specifications of equipment required at the private vends are given here:

- POS terminal
- 2D Barcode reader
- HHT
- Receipt Printer
- WAN connectivity
- Router
- UPS
- LAN cabling
- 4U Rack

2. Technical Specifications for Private Vends

This section explains in detail the specifications for equipment and connectivity required at the vends.

2.1 POS Terminal

The POS application will be hosted on a desktop. Following is the minimum specifications of the desktop:

- Processor - Pentium / AMD > 3 GHz
- Hard Disk - 200 GB or above
- Memory - 4GB
- Keyboard - 104 Keys, Mechanical
- Mouse - PS2, Optical
- OS - Win7 Pro
- Monitor - 15” and above
- Anti-Virus - Any Standard Anti-virus
- Quantity - Each sales counter should have 1 terminal

The POS terminal will host the application required for sale of liquor and the inventory of liquor bottles and cases.
Data Stored in the local desktop is used for validation and reconciliation purpose only. These data will be further synchronized with ESCIMS to prevent any data loss.

2.2 2D Scanner

The liquor bottles will have 2D barcode fixed on the same. As part of the sales process, the vend operator needs to scan this label for verification of validity and update of the local inventory with the sales status. This scanner can also be used for scanning 1D cases for sale.

- Comprehensive data capture options - 1D, 2D, image capture
- Support for all major 1D, PDF, postal and 2D symbology
- High resolution of camera
- Rugged design
- Tempered glass exit window
- Omni-directional scanning, wide working range
- High resolution high contrast colour QVGA display
- Hand held/Fixed type
- Quantity - One 2D barcode scanner per POS terminal

2.3 HHT

The Hand Held Terminal (HHT) will be used for receiving material against the TP and for stock inventory checking purposes. This HHT will be connected to the POS terminal through WiFi. This will enable scan for receiving and also do inventory check anywhere within the premises and outside. Once the scanner is within the WiFi range, it will transmit the data to the POS terminal

- Comprehensive data capture options - 1D, 2D, image capture
- Supports for all major 1D, PDF, postal and 2D symbology
- High resolution of camera
- Rugged design
- Tempered glass exit window
- Multiple on-board interfaces and universal cable

- Omni-directional scanning, wide working range
- Comprehensive connectivity options - including wireless, cordless and corded
- High resolution high contrast colour QVGA display
- Operation - Hand Held
- Connectivity - WiFi
- Quantity - One per Vend
- Data Storage - Enough capacity to store data to for validation purpose

HHT application is to be provided by Excise and currently tested on Motorola 2090.

2.4 Receipt Printer

There would be provision in the POS application for printing of receipts on demand by customer. For the same it is recommended that the Thermal Receipt Printer be used. These printers have minimum moving parts and the printer head is non-contact type. Thus, the rate of failure is lower than dot matrix type printer. Also the speed of printing is higher in such printers.

- Printer Type - Thermal Receipt Printer
- Paper Holder - 300 mm (smaller size will do)
- Paper cutter - Manual/automatic
- Connectivity - Over LAN
- Quantity - One per Vend

Sample Sale Receipt:

Narela, 12, Derawal Nagar, Delhi-110075

Ph: 011-25145849

Sales Receipt

Invoice No : 52192

Date & Time Aug 25, 2011, 5:00 PM

No	Description	Qty	Rate (₹)	Amt (₹)
1	Kingfisher Strng Beer 330ml	2	60.00	120.00
2	Teachers Whsky 180ml	1	340.00	340.00
3	Fuel Vdka 180ml	3	120.00	360.00

Total Amount (₹) **820.00**

(Incl. VAT @ 20%) (₹) 136.66

License No : DL-1 /ST / R-1226

TIN No : BQNSR 234B

Goods once sold can not be returned

Do not drink and drive

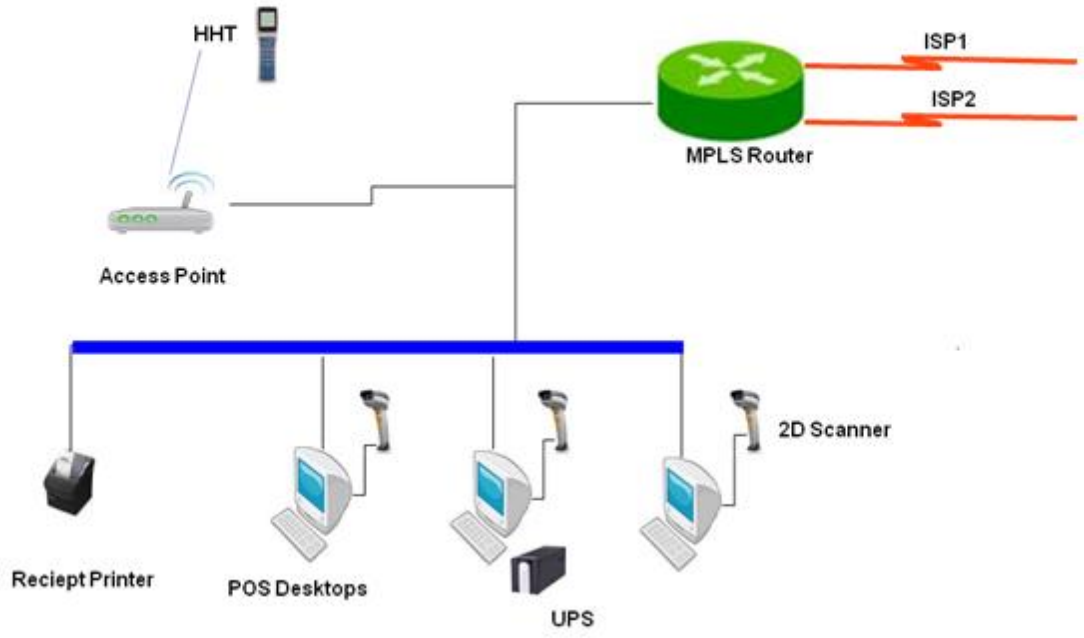
2.5 WAN Connectivity

The vend needs to be connected to the Data Center through two MPLS links of 64 Kbps each. These links need to be from separate service providers. Thus, failure of one link will not result in any connectivity loss of vend with the data centre. However, in the rare event of both links failing, the sales operations in vend will not be impacted. The Vend needs to ensure link is restored at the earliest so that receiving operations are not impacted.

Vends will be interacting with the ESCIMS application for all activities beginning from placement of orders to sales.

- Type of Link - MPLS
- Capacity - 64 Kbps
- Quantity - 2 per Vend

Network Design at typical Vend



2.6 Router

The MPLS links will be terminating onto the router. The router will be configured such that the links operate in active-passive mode with auto switch over to the passive link in case the active link fails. Generally the MPLS links have Ethernet interface. However the private vends need to check with the MPLS service provider on the type of interface required.

The POS terminals will need to connect to the router through a switch. It is recommended that a router with 4 Port Switch card inbuilt be used. Additional switch may be used if the no. of terminals are more that the ports in the existing switch cum router.

It is also recommended that the WiFi functionality be integrated in this router. This will reduce the number of devices and increase the manageability at vend.

- WAN interface : 2 ports, Ethernet / Serial (depending on service provider)
- Switch Ports : One 4 Port switch card. One free slot for upgradability. No. Of switch port will depend on no. Of POS terminals Plus the Receipt Printer
- WiFi : Built-in functionality

2.7 UPS

To ensure uninterrupted operations the private vends must install an online UPS with sufficient backup. It is recommended that 4 hours battery backup should be in place. Below is an indicative power rating per device which can be used to calculate the UPS power rating. However, the vend should check for actual power ratings of the devices.

- Router - 85 VA, One per vend
- 2D Scanner - 20 VA, One per POS terminal
- HHT - 35 VA, One per vend
- Printer - 80VA, One per vend
- Desktop - 250 VA, One per sales counter

2.8 LAN Cabling

The POS Terminals and the Receipt Printer will be connected to the switch ports in the router through LAN cabling. It is recommended that CAT6 LAN cabling with conduits to ensure proper connectivity and reliability be used.

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For Suggestions/ Query/ Clarifications, Email at: escimsexcise.delhi@nic.in