

ATM & RELATED AREAS *SCOPE OF IS AUDIT*

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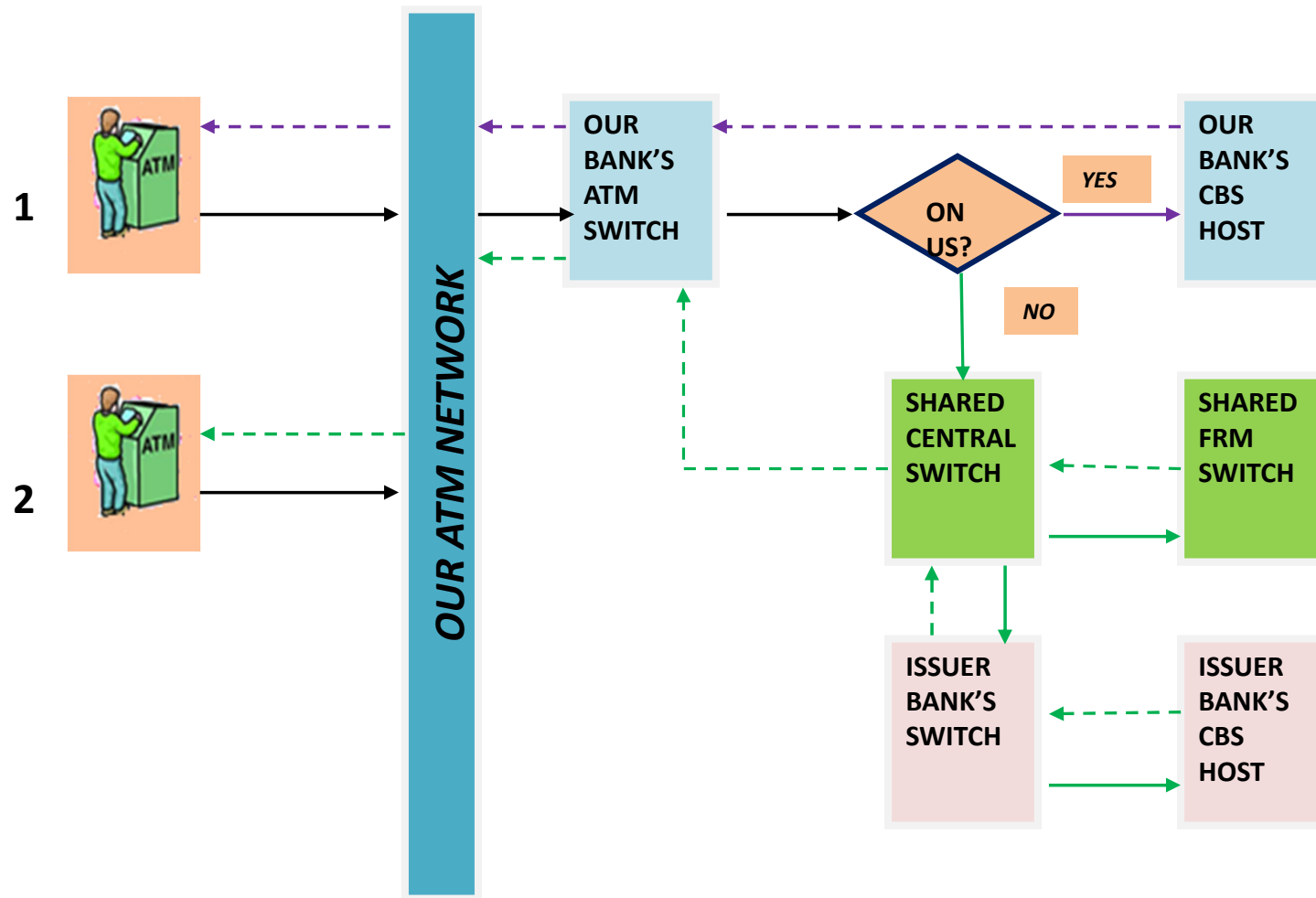
ATM - Types of Installations

- Stand alone
- Networked
- On-site
- Off-site
- Wall through
- Lobby

ATMs

- Mag stripe based
- SMART card based
- Biometric enabled (Aadhaar based)
- Mobile ATMs
- Micro ATMs
- White Label ATMs

ATM Transaction Flow



Components

1. ATM Cards
2. ATM Machines / Micro ATM POS Machines
3. ATM Switch
4. HSM (HARDWARE SECURITY MODULE)
5. PIN Mailers
6. CBS Interface
7. Cash
8. Reconciliation

1. ATM Cards

Types of Cards:

- Magnetic stripe
- Contact based Smart cards
- Contactless Smart cards

Processes involved:

- Card Manufacturing
- Card personalization
- Card delivery
- Brand mandated compliance requirements

2. ATM Machine

- Card reader
- PIN Entry Device (PED)
- Operating System of ATM
- Installation and Activation Process
- Application (ATM end)
- Cash Dispenser
- Logs – Electronic Journal
- ATM Site - security controls
- Network connectivity

3. ATM Switch

- Own switch
- Third party shared switch
- Configurable parameters
- Card Authentication
- PIN confirmation with the help of HSM
- Log maintenance
- BCP/DR
- Compliance requirements – PCI DSS, PA DSS

4. HSM

HSMs provide both logical and physical protection to the high-value cryptographic keys.

Some HSM vendors:

- Thales
- SafeNet

4.1 HSM - FUNCTIONS

- Encrypt PIN entered while operating ATM
- Compare PIN with an encrypted PIN Block
- Generate Data such as CVV for mag stripe CARDS
- Generate and Print PIN Mailers (For Cards & ATMs)
- Generate a CARD Keyset & support the Personalisation Process for SMART CARDS

4.2 HSM – Audit areas

- Physical Access
- Logical Access
- Storage of Cards holding critical keys
- Storage of physical keys
- Redundancy
- Review of documented processes
- Review of processes implemented

5. PIN Mailers

- Stock of Blank Stationery
- Printing infrastructure
- HSM key custodian
- Despatch process
- Process of destroying PIN mailers

6. CBS interface

- Online mode
- Off-line mode
- Batch posting
- ATM Cash report

7. Cash

- Cash Management in-house
- Cash Management outsourced
- Centralised Cash Management through NOC
- ATM Cash Shortage/Excess
- Partial/No dispense
- Reversals
- Technical problems with Dispensers in Cash dispensing and presenting
- Cassette configuration and calibration

8. Reconciliation

Two way reconciliation:

- Raw data from Shared switch
- ATM Transactions processed in CBS

Four way reconciliation:

- Raw data from Shared switch
- ATM Transactions processed in CBS
- Electronic Journal from ATMs
- Data from own switch

Logs

Presentation of sample logs

THANKS

