

# Currency Tracker Solution Architecture

Automated Currency Exchange Rate Monitoring & Alert System



## 1. External Data Source

### ExchangeRate-API.com

Real-time Currency Exchange Rates

- Endpoint: /v6/[API\_KEY]/latest/[CURRENCY]
- Currencies: USD, EUR, GBP → LKR
- Rate Limit: 1,500 requests/month (Free Tier)
- Protocol: HTTPS / REST API



## 4. Alert System

### Email Notifications



#### Office 365 Outlook

- Trigger: Threshold Exceeded

- Recipients: Configured Emails

- Content: Rate, Threshold, Date

- Priority: Normal/High

#### Alert Conditions:

- USD > 330 LKR

- EUR > 370 LKR

- GBP > 420 LKR



## 5. Presentation Layer (Optional)

### Power Apps (Canvas App)

- Latest Exchange Rates Display

- Threshold Configuration UI

- Historical Data Viewer

- Manual Refresh Option

- Mobile-Friendly Interface

### Security & Compliance

#### Authentication

Azure AD / Microsoft 365

#### API Security

HTTPS, API Key Management

#### Data Protection

SharePoint Encryption at Rest

