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Executive Summary:

Provided various software solution designs in Digital Banking and Finance domain for launching new customer winning initiatives, defining roadmap for system performance improvement and implementing enhanced security controls to meet the regulator compliance requirement. Currently serving role in Standard Charted Bank, Hong Kong with key responsibilities of designing application services with payment technologies. Also contributed in designing and implementing various voice application services for digital banking and phone banking services.

Contributing in designing application services based solution design (on premises and cloud) by using new age technologies - React.js, Apollo GraphQL, Python Django along with C++ and SQL.

Recent accomplishments:

- Introduced innovative application services framework using new technologies that significantly Improved the ATM cash transaction Turnaround Time (TAT) (from 1 minute to 30 seconds).

- Designed and implemented "Card Provisioning Interface Application" for Apple Pay Mobile Wallet user registration.

- Designed application services for automating software distribution and Electronics Journal upload.

- Solution Design for Centralized Enhance Security Control application services by using McAfee ePolicy Orchestrator (ePO) for software whitelisting and Winmagic SecureDOC for Hard Disk Encryption.

- Completed HKMA Regulatory requirement of Penetration, Vulnerability Testing and Fixing the gaps.

- Introducing value added application services for customer convenience - QR code based cash withdrawal and Favourite Transaction.

Technical proficiency:

- AWS cloud based application service design

- Fullstack web application design using node.js, React.js and Apollo GraphQL libraries

- Application and integration design using C++, Python and Radis (in memory database)

- Scalable Web Application design using Python Django Web Framework.

- On Premises Application Migration to AWS Cloud.

Current ongoing new solution design initiatives:

- Designing API using GraphQL for Virtual Banking Services – Mobile App and iBanking

- React.JS Application Suite design to migrating Java Applet based Web Interface applications to a light weight GUI application set.

- Building Development and Testing Environment in AWS Cloud EC2 Instances

- Introducing Redis In-memory database interface for improving application performance

Recent projects completed

1. Payment Application Services Framework:

   This project is to introduce a new set of application services on the self-service terminals (ATM, Cash Deposit Machines, Cheque Deposit machines) along with the necessary backend application services. The following are major the application components implemented as a part of the project:
   - Chrome based GUI application on self-service terminals to provide all kind of monetary and payment services to customers.
   - ISO:8583 specification based Interface to process the financial transaction through Payment Switch using TCP/IP Socket with multi-threaded capabilities.
   - Web based Software Distribution software to schedule and apply the application and Microsoft patches remotely on the self-service terminals
   - Windows Services and Web based application to capture the electronics journals of the terminals for audit and verification purpose.

   Role:
   - Application, Network and Infrastructure solution design using C++, C# and Oracle.
   - Vendor and back end team management
   - Interfacing Stack holders for requirement understanding and status update

2. Enhanced Security Control:

   This project is to design an implement the secured and monitoring application services to ensure the protection of the self-service terminals from unauthorized access and smooth functioning. This project introduced the following application services:

   - McAfee ePolicy Orchestrator based application service for white listing software on windows OS and prevent unauthorized application installation and automatic email alert on any suspicious activities on self-service terminals.
   - Winmagic SecureDOC based application services to Encrypt and Decrypt the hard disk by exchanging KEY from the centralized server.
   - 24x7 self service terminal monitoring and cash management system.

   Role:

   - Solution design of centralized security systems with SPLUNK integration.
   - ATM Integration with ePO and HDE through dedicated leased line network

3. Apple pay Mobile Wallet:

This project is to allow bank customers to register their Debit cards in apple pay for card less transaction by using Apple Pay Mobile Wallet. This project delivered the following applications:

- Card Provisioning Web Service Interface.
- Web based Card Life Cycle Management Interface

Role:

- Solution design by working with Vendor team and services providers.
- Building network infrastructure with security policies – SSL certificate and HTTPS

4. Favourite Transaction Service:

This project is to design and implement application to allow bank customers to save their performed transaction as "Favourite Transaction" so that next time they can directly go to the "Favourite Transaction" rather than traversing the menus on the ATM Screen. This project implemented the following application components:

- JBOSS Application server based Java Application to store and retrieve the Transaction details.
- Front end Chrome based GUI to allow customers to save transactions.

Role:

Project delivery and implementation.

HK – ATM Penetration and Vulnerability Testing (Regulatory)

It is a HKMA Regulatory Requirement to perform the Penetration and Vulnerability Scanning of all the payment transaction network that includes application servers and network devices – firewall, routers and switches. The major activities include the following:

- Vulnerability scanning through the Qualys System and PEN test by using Nessus and MAP
- Identifying the gaps and fixing the same

Role:
- Third Party Vendor engagement
- Fixing identified gaps
- Enhancing network devices with appropriate Cisco IOS version and Hash Algorithm Implementation.

Current Job Role:

- Interfacing with Business Team to understand requirement and review the same

- Functional Requirement Specification and solution design

- Representing as a member in Project Steering Committee and Project Working Group for status update and issue tracking for closer

- Vendor management – Finalizing the Scope of Work, issues resolution and implementation