

Sri Thripura @ IKF Finance Limited

IT Setup

Earlier

1. Core Lending Server
 - a) Affected with Virus more than once and losing critical business value in fixing the same
 - b) Heavy dependency on vendor, no in - house competency
 - c) No User Access Controls were implemented
 - d) Application has never been upgraded
 - e) Looked down by Vendor due frequent over the top discussions
2. Corporate Network
 - a) Virus spread over all the network
 - b) Unauthorized software found in the network
 - c) No control over hardware/software Assets
 - d) Software Audit and License inventory verification turns out to be sweating activity on every occasion

Sri Thripura

Diagnosis

1. An IT setup being run by Amateurs
2. IT is seen as support function
3. IT is completely absent in company's long term and/or short term strategy
4. The setup is very rudimentary for 1000cr turnover company

Impact

1. Setup Platform for adopting mobile and cloud technologies
2. Created IT Security Policy and guiding the implementation
3. Created and Implemented Business Continuity Procedures
4. Implemented Periodic Backup and Sanity Verification Procedures
5. Secured Core Lending Server from External Access
6. Secured Corporate Network from Virus and Mal-ware Attacks
7. Secured Official Communication with Collaborated Office Suites
8. Setup Employee Helpdesk System

Effect on Business

1. With Mobile Collections:
 - a) Zero Bucket Loans have improved to 85% from 75%
 - b) Same day deposit of collections and bank statement reconciliation resulting in more cash available for lending
2. EMI due date notifications reduced at least 25 – 30% of Check Bounces
3. Improved Business Processes
 - a) Live Collection and Deposit Tracking



- b) Check Strength of a loan proposal using vendor (Field Inspectors, Valuator and Risk Assessment) portal
- c) eKYC and Credit Score Verification Portal

Our Work

1. IT Security Policy

- a) Hardware / Software Usage Policy
- b) Email Usage Policy
- c) Asset Management Policy
- d) User Access Control Policy
- e) Document Templates

2. Core Application Server

- a) Closed Security Gaps in the product and DB configuration
- b) Upgraded to latest version and enabled important features like
 - i. Bank Statement Reconciliation
 - ii. Upload Loan Documents
- c) Escalation Structure for Issue Addressal
- d) Remote Access
 - i. Enabled VPN and configured for the vendor Ips
 - ii. Record Access

3. Network Diagram and Floor Plan Created

4. Setting up of IKF Home Finance

5. Architected Middle-ware platform for their field teams

- a) Collection Module
- b) Sales Module
- c) eKYC Integration

6. Setup employee Help-desk system



Detailed Case Study

Network Setup

Item	Earlier	Sri Thripura Impact
a. Firewall	Basic Setup with a. Internet Access Restrictions b. Application Server Port Forwarding	a. Update Firmware to latest version b. Removed Admin access to vendor/non - employee users c. Enabled VPN Access to Vendor <ul style="list-style-type: none">✓ Each user binding to their respective IPs✓ Restricting each user what he/she can access✓ Enabled On Primary/Backup Leased Line IP d. Port forwarding for Application Server on IPs: <ul style="list-style-type: none">✓ Primary Leased Line IP✓ Backup Leased Line IP✓ Commercial Line IP
b. Network Switches	Unmanageable Switches with 100Mbps as Max bandwidth achievable. Commercial Line BW is 150Mbps	Procured and setup a manageable switch with 1Gbps to enable following features: a. VLAN configuration for HR/Management systems b. Conf Room for conducting video conferencing
c. Domain Controller	NA	Installed and Adoption pending due to Client Licenses (Home Licenses of Windows 8 procured)
d. VPN and Remote Access	a. No VPN Access b. Remote Access was provided over combination on Any Desk and Microsoft Remote Desktop	c. VPN access provided to vendors as elaborated 1.a).c d. Remote Access Policy: <ul style="list-style-type: none">i. Core Application Server - Vendor<ul style="list-style-type: none">➤ UAT Server - Unrestricted access➤ Live Server - Attended access➤ Liver DB



		<ul style="list-style-type: none">✓ View User - Unrestricted access✓ Write Access - Attended accessii. Middle-ware Vendor<ul style="list-style-type: none">➤ Application Server - Unrestricted access➤ Database Server - Unrestricted access
e. Internet Service Provider	<ul style="list-style-type: none">a. Leased with 4 Mbpsb. Commercial Line with 150 Mbps	<ul style="list-style-type: none">a. Identified that backup line was not installed according to the contract. Vendor duly fixed it.b. 150Mbps was not utilized full capacity due to switch incapability
f. File Server	<ul style="list-style-type: none">a. Windows File Server, is a host of virusesb. No Access restrictions defined	<ul style="list-style-type: none">a. Move to Smaba on Ubuntub. Allocated a user for each department and share access is restricted



Asset Management

Item	Earlier	Sri Thripura Impact
a. Hardware	No Tracking	Tracking the following IT assets with ownership a. Monitors b. CPU Cabinets c. Keyboard d. Mouse e. Router f. Laptops g. Firewall h. Network Switches i. KVM Switches
b. Software	No Tracking	Software Installed on each machines a. Operating System i. Version ii. License Key b. Office Software i. Microsoft Office ▪ Version ▪ License ii. Kingsoft Office



Application Server

Item	Earlier	Sri Thripura Impact
a. App & DB Security Review	<ul style="list-style-type: none">a. Database passwords are stored in plain English lettersb. MySQL root access is unrestrictedc. Log files log user passwords in plain Englishd. Server password was predictable	<ul style="list-style-type: none">a. Application Configuration Files now saved encoded passwords against plain passwordsb. MySQL view user creationc. MySQL Root Access restricted to LAN IPsd. Server Password Complexity Enhancede. Log files does not show user passwords
b. Backups	<ul style="list-style-type: none">a. Local Backups on daily basisb. No rolling up of the backups	<ul style="list-style-type: none">a. Shared backups with another region on regular basisb. Rolling up the backups on weekly and monthly basis
c. BCP	NA	<ul style="list-style-type: none">a. Created BCPb. Backed up<ul style="list-style-type: none">i. Software used in building the serverii. Application binariesiii. Application Configuration Fileiv. DB Configuration File
d. Access Review	NA	User Access List is shared on regular basis with business for review and corrections.
e. Issue Closures	<ul style="list-style-type: none">a. Engage in call with customer careb. Escalate if not resolved	<ul style="list-style-type: none">a. Created Escalation Matrixb. Create Issue Dashboardc. Shared Issue Open/Closure Metrics
f. Feature Utilization	NA	<ul style="list-style-type: none">a. Enabled Upload Document Featureb. Enabled Cibil Additional Matches Reportc. Bank Statement Reconciliation



Hardware Optimization

Item	Earlier	Sri Thripura Impact
a. Server RAM	Under utilized due to wrong license	Applied suitable license to utilize the resources
b. S/W requirements Vs H/W provisioned	16 GB of 48 GB RAM used by app server 24 GB of 48 GB RAM used by DB	Moved all applications to Virtual Machines hosed on VMWare ESX 6.5
c. RAID#1	Not aware of the configuration	a. Converted to Non - RAID b. Provisioned more disk space

IT Support

Item	Earlier	Sri Thripura Impact
a. Help-desk	On call	a. Established Help-desk for IT, HR and Admin tickets b. SLAs for issues raised based on the severity

Partner Management

Item	Earlier	Sri Thripura Impact
a. Software License Partners	a. Licenses procured with hardware procurement b. OS licenses procured not useful for Office usage	a. License procurement with 2 Microsoft Gold Partners b. Procuring Professional Licenses in accordance with hardware procurement
b. Hardware Partners	Refurbished Hardware Partner	NA

New Initiatives

Middle-ware Platform

- a. Server Development in Java Micro Services and node JS
- b. Front end development in Angular 4
- c. Progressive web app development in ionic view
- d. Team acquisition
- e. Collection Module - Mobile platform for Recovery Force
- f. Cibil Integration for customer credit history check
- g. Lead Processing - Mobile platform for Sales Force

IKF Home Finance Setup

- a. Procurement of Hardware
 - i. Desktops
 - ii. Laptops
 - iii. Servers
 - iv. Firewall
 - v. Switches
- b. Procurement of Software
- c. Firewall Configuration
- d. Network Configuration
- e. Setting up Application Server
- f. Setting up DC
- g. Setting up File Server
- h. Anti virus procurement and deployment
- i. Business Continuity Policy
- j. Document Management Software
- k. Help-desk for IT, HR and Admin tickets