

Choice Case Study

Datacentre Rebuilding and Structured Cabling Solution for State Bank of India Funds Management at Cuffe Parade, Mumbai

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Project Preface

Choice Solutions Limited was short listed by State Bank of India Funds Management Pvt. Ltd. through a techno commercial bidding process for rebuilding & structured cabling solution for upgrading their existing Datacentre from Tier I to Tier II.

SBI FM, commonly known as SBI Mutual Fund (SBI MF), is a joint venture between the State Bank of India, and Société Générale Asset Management, one of the world's leading fund management companies that manages over US\$ 500 Billion worldwide. SBI Mutual Fund is India's largest bank sponsored mutual fund and has an enviable track record in making judicious investments and consistent performance in wealth creation.

The fund traces its lineage to State Bank of India - India's largest banking enterprise. The institution has grown immensely since its inception and is patronized by over 80% of the top corporate houses of the country and an investor base of over 5.8 million investors. The existing Datacentre amongst other IT equipment, also houses the key RBI servers and stock exchange servers.

Due to historical reasons the Datacentre has grown in an unplanned manner and met only Tier I specifications. Further the network cabling had not been planned and implementation was on ad-hoc basis.

SBI MF is considering relocation of the Datacentre in the visible future. However as an immediate risk mitigation strategy, SBI MF felt the need for upgrading the Datacentre to Tier II level, providing Precision Air-Conditioning while retaining existing comfort ACs for back-up, as well as providing CCTV coverage and proper network architecture for the Datacentre.

In addition to the immediate benefits, proper network architecture was also envisaged as a means to reduce the risks associated with the later date relocation.

The Challenge

In this project, Choice Solutions was expected to study the existing Datacentre physical infrastructure issues and propose a solution that mitigated the problems and helped maintain Tier II uptime.

Choice Solutions was required to assist SBI MF to upgrade its datacenter from Tier I to Tier II without any stoppages

The significant challenges included working in a live & business critical environment, which was not fault tolerant, space constraints due to very limited floor to ceiling height with Air Conditioning ducts & deep beams running above and no space to add precision AC condenser units, unless the existing comfort AC condensers were removed and reconfigured.

The project scope included

- “As Is” Analysis of existing DC design, with special focus on space constraints.
- Designing the Tier II solution for
 - Physical Layout of the DC and associated Services Areas
 - Power load calculations
 - Electrical design for LT network
 - Surveillance system
 - Network management system
 - Network architecture drawings
 - Precision cooling solution
 - Water Leak detection system
- Executing the project in a time bound manner and at same time ensuring minimum risk to the ongoing critical operations.

Another significant challenge was the HVAC solution.

The Solution

Choice Solution worked closely with the client to provide a reliable and modular solution that would assist relocation requirement. The key activities undertaken include

- Mapping the existing layout, services plan. Special attention was paid to the services above false ceiling to evaluate possibility of increasing available height in the Datacentre so as to allow introduction of raised access floor.
- Planning for an increase in data room size by merging part of adjoining room and reallocating overall space.
- Mapping the existing network architecture manually in a live set-up.
- Analyzing the AC condenser space to most effectively reconfigure the limited space, including consideration on how reconfiguration could be done with minimal impact to Datacentre uptime.
- Carrying out detailed risk analysis for the activities involved - including civil work activities.
- Carrying out the actual execution works in a limited shutdown window acceptable to the client's business.

The Benefits

The client would be able to take advantage of the following benefits from the proposed architecture of this project

Scalability and Modular Design: Various aspects of the facilities are UPS, special low height Precision Air Conditions (PAC) in the datacenter which is scalable and easy to relocate especially after considering the site constraints for moving large equipment.

High Service Uptime: The infrastructure standard was upgraded from Tier 1 to Tier 2 to include redundancy for critical items. Dual power paths were introduced to extent possible to enhance reliability. Super switch (Static switch) was introduced for dual power paths for single corded equipment. TIA 942 standards were applied to minimize risk of interference between power & data and for ensuring power network architecture within the Datacentre.

Protection from Equipment Failure: There is redundancy for UPS, PACs and the some portion of the power delivery path.

Investment Protection: The client desired to limit investment as relocation is envisaged. This has been achieved by reutilising the existing equipment to extent possible. Also, sizing of most equipment was done considering the potential sizing for new facility thereby increasing possibility of reuse of the existing equipment.

Reduced Risk during Relocation: Equipment sizing has been done considering quick movement of equipment would be vital during relocation. The network architecture has been well documented and proper labeling of all racks, cables, equipments & ports has been done to minimize effort & risk when carrying out the relocation activities.

Client Satisfaction on Delivery Date: Detailed Project plan was agreed with client as was the risk and the risk mitigation strategy. All contributing and potentially affected parties were kept informed well in advance of all critical activities. The final cut-over was carried out on a long weekend that had major Hindu, Muslim & Catholic festival coinciding. Back-up plans included some personnel not turning up due to the festivals and continuous follow-ups were done to ensure works proceeded as planned.

The detailed planning, follow-up and communication ensured we could complete the activities as planned and without any untoward event therefore ensuring project success.

The Benefits

Benefits to Choice Solutions Ltd.

The SBI MF project provided a prestigious project reference for Choice Solutions Limited. The number of constraints, potential issues and a high potential business loss to the client tested the planning, risk identification & mitigation strategy and execution capabilities of the Choice family.

This was a project where even a single incidence could have spelt major loss for the clients business. At the end, the fact that the project went off successfully and received accolades from the client says it all.

If we take up the case of the customer, they were able to leverage the skills of the Choice consulting and delivery teams. Right technology was introduced that best met the project requirements of modularity, scalability and addressing site specific constraints while at same time preventing waste of existing equipment.

The project being executed worked for the best interests of both the customer and Choice Solutions.

The rebuilt Datacentre has gone live in September 2010.

About Choice Solutions

Established in 1991 Choice Solutions Ltd. is a leading IT and Facilities solutions provider. Choice Solutions Ltd. business comprises of Six different practices, namely

IMS

- Desktop, Server, Network, Storage, Support, OS, Assets, Apps, Non IT
- Hardware - A-Add, M-Modify, I-Install, C-Change, R-Repair
- Assets, Security, Software Distribution, Upgrades

Networking

- Packaged Services Monitoring & Management
- Products, Security, Design, Deploy, Maintain
- Auditing & Compliance, SOC

Datacenter

- DC Audit, Monitor & Manage, Training
- Assess, Design, Built, Deploy, Disaster Recovery

Consulting

- Business Consulting, CIO & Technology Services, Physical Security, Power Devices, IT Consulting
- DC Consulting, ERP, CRM & Custom Apps

Cloud Computing

- Cold Site – Backup, Disaster Recovery
- Hot Site – HaaS, Software, Manage
- Public Cloud, Private Cloud, Hybrid Cloud
- CaaS, License Software, IaaS
- Disaster Recovery

Power

- Power Audit, Equipment Management
- Physical Security, Power Devices
- Power Saving Devices
- Design & Audit
- Renewable Energy Products