

Choice Case Study

Server Room Build Out for Quintiles Technologies

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Project Date

9th February 2008 till 20th April 2008

Project Preface

Choice Solutions Ltd. was awarded the contract to design the datacenter to support the developers and other users on two floors of Quintiles Technologies (India) Private Limited at Hulkul Brigade, Lavelle Road, Bangalore. The work scope included overall project management during the DC implementation, audit of the work quality by the vendors and testing and troubleshooting of IT infrastructure along with client IT support personnel.

Project Background

Quintiles Technologies is the world leader in testing of pharmaceuticals. They have multiple offices in Bangalore. They have acquired new sites where they want to shift a few of their project teams along with senior management personnel. The ground floor was earlier occupied by HP, where they had a DC and this requires revamping of the ground floor. On the first floor, HP had hub room. The hub room and the adjoining IT Store room needs to be merged to make for a datacenter on the first floor. The proposed datacenter needs at least four network rack and passive LAN ports that must be terminated for the first floor.

Project Challenge

There were several challenges during the project design and implementation phases:

- i. Quintiles did not want to reinvest either on the IT infrastructure of first floor or on the passive and electrical cabling. This presented a new challenge for testing each network port for proper functionality and termination of passive cabling, which must be capable of supporting heavy data traffic and IP telephony.
- ii. Another challenge was the cable routing path, since the facility's field cables needed to come into server room.
- iii. The Datacenter required dual active redundant power path for all IT equipment.

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There were several other challenges in the Electrical System, Cooling System, Environment System, etc.

- iv. The server room had no security mechanism
- v. The datacenter required redundancy and no SPOFs (single points of failure) for power infrastructure and emergency lighting
- vi. There were several other challenges in the Electrical System, Cooling System, Environment System, Network Cabling System, and Access Control System for Server Room, Fire detection and suppression System and physical surveillance.

Choice Role and Solution

Although the facility is small in size and server room will have very less nos. of servers, the design and solution required for world class data center; the overall solutions provided are:

The power for the entire facility was designed with N+1 redundancy; and a 30KVA APC UPS was used for facility lighting.

- i. *Power for Server Room:* The IT equipment in the datacenter required high uptime (5 nines) and hence they were designed with dual active redundant power path using AP state-of-the-art Symmetra power array with built in redundancy for each components. This provided 2(N+1) redundancy as per The Uptime Institute specifications. Power for facility was also designed with redundancy using 2x120Kva APC-MGE UPS system. The power for the entire facility was designed with N+1 redundancy; and a 30KVA APC UPS was used for facility lighting. The power for data center, workstations and work area lighting were designed so as not to be disrupted during changeovers or power failures.
- ii. *Cooling:* The server room loads requirements were less stringent than power requirements and the equipment did not need precision cooling. Hence the design included 2 nos. of CAC in N+1 redundancy mode to help reduce purchase and management expenses.
- iii. *ISP/IP Telephony:* As per current requirements, Tata Communication was appointed as ISP and Digital telephony service provider. A high speed MPLS was terminated in to main office. Dedicated MUX was placed in Server room to support the connectivity.
- iv. *Passive Cabling:* As per the client new cabling which is for Server room and continuing old passive cable structure for first floor and new cabling for ground floor, we have called implementation, testing teams and fixing them with dual ports which can support gigabit speed for data and IP telephony.
- v. *Active:* As per requirement, Core III switch Cisco Catalyst Vll6509 was connected with Avaya media gateway S8500.
- vi. *Access Control:* The server room has made secured with ADT Tyco's biometric and HID as dedicated access control for server room.
- vii. *Fire:* The server room was made secure with FM200 gas flooding system for fire prevention, detection and suppression.

Client Benefits

After completing the desired task with help from Choice Solutions, the Quintiles IT team in Bangalore received several tokens of appreciation from their senior management (Senior Director Global IT - Asia-Pacific & India Region) for completing the project in time and an optimal, effective design. The datacenter and facilities were protected from power disruptions and now they have a highly-efficient datacenter for servers and storage arrays.

Next Steps

During the project execution the above-and-beyond service and support from Choice Solution Ltd. resulted in the project being successfully completed within the stipulated deadlines. This helped instill great trust for Choice Solutions. The client has further awarded several contracts for power and electrical cabling audits to Choice Solutions.

The datacenter were protected from power disruptions and they had a highly-efficient data center for servers and storage arrays.

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