



COMPTON COMPUTERS PVT. LTD

DATA CENTER DESIGNING FOR CROWNE PLAZA



DESIGNING DATA CENTERS & SERVER ROOMS

Compton's Designing Data Center Services are an enterprise-wide, consultative approach to help you manage mission critical environments. The services encompass the entire lifecycle, from assessment, strategy and design, to implementation and operational services. We give the client a Data Center that is state-of-the-art and capable of meeting the most stringent demands.

Our Data Center Management helps design and manages data centers across heterogeneous platforms and supports these with global hosting capabilities. Our solutions optimize and consolidate the data center and its resources, leading to improved service levels and reduced cost of ownership.



Our Designing Data Center services include-

- Understanding the application, database and content
- Space designing i.e. optimized use of real estate
- Cooling system analysis as per BTU calculations
- Communication and data cabling
- Selection of equipments-Number and types of racks, Number of servers and their configuration, switches, storage devices, backup equipments.
- Physical security
- Fire detection and suppression
- Designing IT policy
- Testing and follow up

Manageability of Our Data Centre Solutions-

- Mature service and delivery practices and security standards.
- Powered by TIER 3+ datacenters in Delhi, Mumbai and Bangalore.
- These Data Centers are ISO 20000-1 & 27001 certified.
- World class infrastructure to co-locate your business critical IT equipment.
- Various managed services option allow you to completely outsource to experts while you also concentrate on your core lines of business.
- We also specialize in delivery Turnkey DATA CENTRE build out projects.

Creating Data Center at Crown Plaza hotel at Rohini New Delhi

When we started making this data centre we had a challenge in front of us that we had to house about 80 servers securely in a not very conducive environment of a five star hotel where fire water leakage rodents are a major threat to the IT operations. As five star hotels have very small area for it's maintenance and within the same area all services like large laundry unit, HVAC units, Chiller plants, multiple and large kitchens and a small place for keeping the servers safe, up and running 24*7*365 days without any failure. To achieve this we were given about 3000 sq.ft. space for the data centre, about 1000 sq.ft for UPS room and 2000sq.ft. for the IT Executive and separate cabin for the IT Manager.



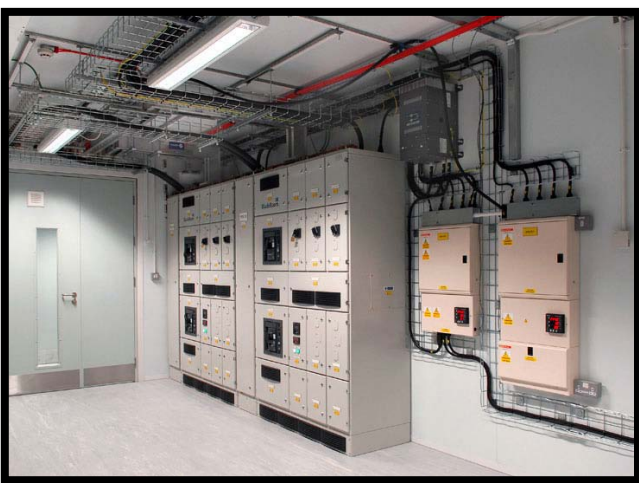
False Flooring:

We maintained the data center raised flooring at 450mm so that a proper air flow for PAC is maintained. All the services which are to be delivered under the floor are at different heights. The ground zero is painted with two hour fire resistant paint from viper and then covered with insulation of grade 0 (fire resistant) so that we get adequate coverage against accidental fire due substantial amount of power and data cables.



.All the cable trays guiding the flow of electrical cables are rested directly on insulation of ground zero. The raceways are put on the stand at the height of 300mm so that adequate distance between the data and power cables is maintained. The water leakage detection wire is stick on this insulation so that any kind of water seepage or leakage at ground zero can be detected. VESDA pipe and capillary are put on the height of 250mm at proper distance to each other and other services to detect any smoke or fire. Gas flooding nozzles are placed at the height of 200mm from ground zero at proper distance from each other.

Electrical system of data Centre:



It is a type III data centre so there is not complete redundancy of resources. One of the major lacking is the redundancy of stable power source only one source of state power supply. The generator power source is a stop gap arrangement for the state run power source. We maintained less than 2Ω resistance in the earth. We got 8 earth strips out of which four were directly from the earth pit in one of the shafts of hotel, these are called pure earths. The balance four earths were being shared other equipments in the hotel i.e expensive items in hotel

Precision Air-Conditioning (PAC):

The data centre has a very typical cooling requirement of 17 to 21 degree centigrade. This is difficult to achieve with traditional window/ split or cassette air conditioners. As there is a lot of heat being generated by various servers/ firewalls/ routers/ Video servers/ Voice Servers/ Storage systems and switches this need very special type of cooling from the Precision Air-Conditioners which throw the cool air under the raised flooring which is discharged through the discharge tiles in the raised floor using air dampers.

Rodent Repellant System:

Rodent Repellant System is mainly provided in areas where false flooring is required in a DATA CENTRE. The Electronic Rodent System should be used in a manner so as to protect the entire volume of space under consideration including above false ceiling, below false ceiling and below false floor.

Water Leakage Panel:

For this data center we used Siemen's water leakage panel connected to about 100 mtrs of sonte water leakage detection wire which is spread out all across the length and breadth of the data center. This is a very fine cable with water detection sensors protruding out at regular intervals this wire is spread on the insulation of the data centre. This wire sense the presence of water on the data centre ground zero below the false flooring and sends it to the panel which hoots to send alarm it can be configured to send a mobile message of an email also. The panel can be divided into four zones to exactly know which part of the data centre is affected by the water leakage. The panel comes with minimum 2 Zones, 4 Zones, 16Zones and unlimited zones capacities depending upon the size of facility.

Panels and their Placement:

We placed all the panel i.e Water leakage, VESDA, Fire alarm, Gas flooding outside the data centre in IT executive room as they become easy to access and maintain also in case of emergency within data centre it becomes very easy to operate them and control various services. These are all connected to the UPS power to allow 24*7*365 days operation. We wanted to place them outside the data center also because we don't want anybody entering the data center for maintenance jobs. The temperature within data center has to be maintained between 19 to 21 degree centigrade.

Fire safety and suppression system:

Fire fighting is a very important service in a data center as it is a facility holding very important information and there is a big concentration of wires which are very prone to fire. For this purpose all the walls, windows and doors are made from fire resistant materials and covered with 2 hour fire resistant paint. Fire services in data center are divided into two separate parts of fire detection and gas flooding system.

VESDA: We used a Very Early Smoke Detection Apparatus (VESDA) from x-tralis to detect the fire in its very early stage. The fire services in a data center are very specialized as there is a great danger of fire starting due to some short circuit or voltage fluctuation. Gas Flooding

Systems: We use FM200 based gas flooding systems. The gas based fire suppression systems are effective for electronics and computer items and also are environment friendly.



COMPTON COMPUTERS PVT. LTD.

Address : B-35A, 2nd Floor, Main Road, Hans Raj Seth Marg, Block B, Kalkaji, New Delhi, Delhi
110019

Contact : +91 98110 21810

Mail –Id : sandeep.vahi@compton.in

Website : www.compton.in