

CtrlS DATA CENTER NOIDA



CtrlSTM

Asia's Largest
Rated 4 Datacenter

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Rated 4 Data Center





GENERAL BUILDING FACILITY

- | Building Dedicated & designed to be as a Data Center
- | DC Building - G+7. Utilities Ground & terrace floors
- | CtrlS Owned building & infrastructure
- | Storm and flood risks (1:100 yrs. flood plan)
- | Total Building Facility 122440 square feet
- | Raised Floor Space 108850 square feet
- | Designed to holds approx., 2000 standard Racks
- | Building located in seismic zone-4 and designed to meet seismic zone-5 norms. It Can withstand earthquake of Richter scale 8.5 to 9.0



CONSTRUCTION

- | Double screen wall to lower thermal loss and enhanced security
- | Used flyash bricks for construction of the building
- | Raised floor height – 1050 mm
- | Raised Floor to True ceiling height – 13.77 feet
- | True floor to Floor height- 17.22 feet
- | Raised Floor loading – 1850 Kg per Square Meter and true floor loading 1500 kgs to 2100kg/Sqmtr.
- | Designed for ceiling mounted cable basket for Data cables & Below false floor cable trays/raceways for Power cables
- | Building is designed for redundant shafts to create space for ample cables and diverse paths
- | Unistruct structure to avoid server hall free from drilling in future and allow flexibility to change cable path etc.,
- | PT(Post Tension) slab-with beamless ceiling for more height clearance and better air flow management



PHYSICAL SECURITY/ACCESS CONTROL/CCTV

- | 24-hour manned security, including patrolling by armed guards and perimeter inspections
- | Guard rounds Monitored through Guard patrolling devices
- | 9 level Security barriers to access Server hall



PHYSICAL SECURITY/**ACCESS CONTROL/CCTV**

- | Building Ground Floor level height is elevated 1.2 Mtr height from Road level
- | 4.5mtr height Perimeter wall with Power fencing for robust security
- | Building & Data Center Entries controlled through Turn stile & Tube stile to avoid tail gating
- | Proximity Access includes Biometric Control for entry into critical and non-critical areas
- | Antipass back access system enabled inside Data center
- | Visitor control through Visitor management system (VMS)
- | UVSS (under vehicle surveillance system) Baggage scanning, HHMD & DFMD detector
- | Parking more than 70 meter away from DC building and Outside premises only
- | 140 motion based night vision Cameras installed for monitoring all the critical & Non-critical areas
- | Surrounding video surveillance by PTZ Cameras
- | CCTV backup minimum of 90 days with 24X7 monitoring



POWER

- | Data Center designed for 9 MVA power and expandable to 15MVA
- | Two Active grid Power supplies from different substations i.e. N+N
- | Dedicated utilities for Data Center building
- | Dual power distribution channels up to the racks through diverse paths
- | LT power distribution redundancy – N+N
- | Diesel Generator redundancy – N+N
- | Fuel storage capacity – 1 Lakh liters, sufficient to run for 96 hours on full load
- | IGBT based UPS with system redundancy – N+N
- | Battery backup – 15 minutes on full load of each Source
- | All mechanical systems connected on dual sources power through ATS connectivity
- | DG operations controlled through PLC
- | K-13 rated Isolation Transformers with Zig Zag winding in PDUs at the output of UPS to feed the power to IT Racks
- | Dedicated UPS system for Non-IT critical systems with N+N Configuration



COOLING

- | All Indoor Utility area is housed with Air Handling Units & Ventilation systems
- | Server hall is equipped with Precision Air Handling Units (PAHU) to support air conditioning, temperature and humidity control requirements
- | Critical Utility Rooms & Server Room PAHUs are enabled with Scheduling & auto change over mechanism
- | Chillers design capacity of 2000 TR With N+1 Redundancy
- | Water cooled chillers with quick start function
- | Dual active header system available
- | Air conditioning monitoring and controlling through BMS system
- | Hot aisle and cold aisle segregation in Server Hall
- | RO Treated water used for Chiller & Cooling tower. TDS & PH of 2800 ppm & 9



FIRE DETECTION & SUPPRESSION

- | Addressable & Intelligent Fire Alarm System
- | VESDA aspiration smoke detection for all UPS Rooms, Battery Bank, MMR & Server Rooms
- | Fire hydrants & water sprinkling system for Office space & Non Critical rooms
- | Inergen (IG-541, Non-Hazardous) Gas Fire Suppression system available for Server Hall, UPS room, Battery Room & MMR's with 100% on site redundancy (N+N)
- | Portable fire extinguishers are strategically placed throughout the raised floor and utility rooms
- | FAS system integrated with Lifts, PA, Access Control and HVAC system



ENVIRONMENT & CLIMATE CONTROL

- | Controlled Environment with HVAC/PAHU to ensure optimum temperature of $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$
- | H2 Sensors for Battery room, SO2 & NO sensors for Server rooms for continuous monitoring of levels
- | Full proof chemical/contamination datacentre with air tight envelope along with air purifiers and treated fresh air system
- | Dust Control at 5 micron & chemical filter to meet G1 level as per ISA guidelines inside server hall
- | Controlled humidity of $50\% \pm 10$



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TELECOMMUNICATION REDUNDANCY

- | The facility has redundancy in its telecommunication links
- | Facility designed with redundant path for incoming telecommunication lines
- | Carrier Neutral
- | Two Separate Mux/Meet me rooms with N+N redundancy
- | Diverse paths from Mux rooms to Server Hall
- | All major Service Providers available



BUILDING MANAGEMENT SYSTEM

- | BMS room is manned 24x7 with dedicated staff
- | Battery Monitoring system, connecting all UPS batteries for online monitoring
- | Monitors all FAS, WLD, Rodent control, VESDA & PA System for critical areas
- | Provision to monitor from other two CtrlS datacentres i.e; (Mumbai & Hyderabad)
- | Communicates Critical alarms through Email/SMS Alerts
- | Integrated Building Management System to monitor Power, HVAC, Utility, Environmental parameters, safety & security infrastructure



FACILITY GROUNDING & LIGHTENING PROTECTION

- | Earthing System contains of copper mat Earthing & GI Mat Earthing grids meeting IS 3043
- | Individual Earthing system for DG, Transformer, HT Panels & HSD earthing
- | Earthing system comprises of Copper and Galvanized Iron strips
- | Redundant earth electrodes are used for each system
- | The resistance of the earth electrodes has been tested at less than 1.0 ohm
- | Facility is equipped with lightning protection with dedicated earth pit & redundant earthing paths
- | Surge protection systems are placed in strategic locations



GREEN INITIATIVES

- | Hot aisle & Cold aisle segregation to improve efficiency of cooling system
- | Adopted Green Data Center designs in Building constructed from blocks made from fly ash
- | Low no load losses of transformers and PDU's
- | Data Center designed to achieve PUE of 1.38
- | Low ikw/tr chillers and plant
- | Rain water harvesting pits
- | Dual Screen walls for less thermal losses
- | Eco-Friendly Fire suppression system for Data center
- | More than 25% of plot area used for landscape area
- | No vehicle parking inside the campus
- | VFD (variable frequency drive) systems are in place for all AHU's and Primary, Secondary and Condenser Pumps to reduce energy consumption in cooling



OTHER FACILITIES & KEY HIGHLIGHTS

- | 24X7 Remote Hands support available
- | IT infrastructure monitoring through all locations
- | Cafeteria & Recreation area available in basement
- | BCP Seating and storage space available
- | Data Center Uptime 99.995% as per Tier 4 /Rating-4 Standards
- | Expansion space available



OTHER FACILITIES & KEY HIGHLIGHTS

- | 24X7 skilled Facilities staff available at Data Center
- | Certified Data Center Professionals (CDCP, CDCS & CDFOM)
- | Fire drills conducts once in six months
- | 24X7 mobile Doctor available within 2.5Km
- | 24X7 ambulance available within 2.5Km
- | Fire brigade 7.5 km from campus
- | 24X7 local Network operations center (NOC) with expertise to deliver management services
- | NCR's largest Tier-4 /Rated-4 Data center



WATER AVAILABILITY & MANAGEMENT

- | Municipal water availability through dedicated line from Noida authority
- | Ground water availability with Two bore wells
- | Automated sewerage & Rain water pumping systems with redundant pumps
- | RO Plant with soften the water
- | 1000 KL Water storage capacity with individual tanks for Fire, Raw & Soft water includes overhead & Basement



ELEVATORS

- | Dedicated elevator for DC floors
- | General Elevators for man movement
- | Elevator controlled through access control system and monitored through CCTV
- | Largest Freight elevator with 4 ton capacity for material movement (WxDxH - 1.65mx3.25mx2.6m) and levelled till floor height (avoid tilting of material)



STORE ROOM & STAGING ROOM

- | Ample space available at basement floor to store the servers
- | Staging room with power and air conditioned for testing of the servers before installing in Data Center



CERTIFICATIONS



**Certified for
ISO 27001
Information Security**



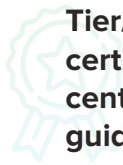
**Certified for ISO
9001:2008 Quality
Management
Systems**



**Certified for ISO
22301-BCMS**



**Certified for ISO
20000-1 IT Service
Management**



**Tier/ Rating-4
certification for Data
center as per TIA-942
guidelines**



**SOC-1 &
SOC-2 Certified**



FEATURES



**Faster
Installation**



**Quicker
GTM**



**Faster
Scalability**



**Robust
Security**



**Zero
Downtime**



**Adherence
With Compliances**

Noida Branch Office Address

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