



JT First Tower Lane

Data Centre

Facility Product Description

JT's Data Centre Hosting Service provides a resilient and highly secure computer room environment with protected incoming power supplies and a fully resilient network providing the latest IP and networking solutions.



Data Centre specification

JT's Data Centre provides a secure, environmentally controlled and protected facility, with reliable connectivity providing:

- Dual fed UPS (10 minutes battery autonomy at full load)
- Redundant Generator backup (minimum of 24-hour diesel supply)
- Bulk fuel storage increasing the on site diesel supply to a minimum of 72 hours
- Fully redundant air conditioning system
- VESDA early warning fire detection
- Temperature and humidity sensors
- Water detection sensors
- Dedicated on site security guard 08:00 to 20:00 Monday to Friday.
- Out of hours Security Patrols
- FM 200 Gas Suppression
- Dedicated on site security guard
- 2 KW AC electrical power included with each rack
- Additional power available on request
- Air conditioning system configured in N+1
- Digital CCTV monitoring deployed throughout critical and operational areas

Secure Solutions

JT's Data Centre service is fully accredited:

- ISO 27001
- PCI-DSS v3.2
- SOC 2 & 3 Type II

Rack specification

All racks are lockable and designed to accommodate multi-vendor servers:

- Earth continuity
- Dual power distribution units (2x 32-amp circuits)
- Dual redundant UPS (10 minutes battery autonomy at full load)
- Dual power strips with amp metre and C13 & C19 as standard
- Rack sizes start at 600 x 1000mm up to 800 x 1200mm

Ethernet or fast Ethernet presentation provided. VLANs can also be provided.



Data Centre - Air conditioning

Climate control for the Data Centre is provided by 7x Denco 90 (KW) units and 7x Airedale 85 (KW) units. Each of these units circulates 5.6 cubic metres of air per second. The total cooling for the Data Centre is 1225 (KW). The air conditioning in the Data Centre is retained at an N+1 situation ensuring that if one air conditioning unit fails there is sufficient cooling capacity provided by other air conditioning units. Power room - Air conditioning The power room has its own air conditioning units, which are independent of the cooling system for the Data Centre. To ensure that the UPS is kept in the optimum climate 3 Stulz Comptrol 1002 units have been installed.

Power room - Air conditioning

The dedicated power rooms have their own air conditioning units, which are independent of the cooling system for the Data Centre. To ensure that the UPS is kept in the optimum climate 3 Stulz Comptrol 1002 units have been installed.

Electricity

FTL Data Centre is equipped with two dedicated electricity substations which provide power to the entire facility. Each substation is rated and 1000KW and diversely fed from the HV network.

Data Centre

The power to the facility is fed by separate dedicated 1 MVA transformers. Each cabinet is supplied with 2x 32 amp single phase supply via separate CPDU's. Provision has been made to accommodate all individual power requests.

Generator

The Data Centre is supported by five onsite generators which are contained within their individual acoustic housings separate to the Data Centre. Each unit is rated at 500 KVA. In the unlikely event of a generator failure these units are configured to 2N+1 to provide total power resilience.

Alarmed components	Action taken	Monitoring
Engine run	Immediate action	24x7x365
Engine fail	Immediate action	24x7x365
Low fuel	Immediate action	24x7x365
Low water	Immediate action	24x7x365
Battery charger fail	Immediate action	24x7x365

Test	Frequency
Off load	4 weekly
On load	13 weekly
Full load	Yearly



UPS

2 x Vertiv Liebert eXL 600kVA UPS units providing transformer-free operation, >0.99 input power factor, <3% THDi rectification and delivers an outstanding double conversion efficiency of up to 97% - reducing operating costs and keeping energy dissipation (kW) to a minimum, each supplies a minimum of 10 minutes battery autonomy.

The power output of the system is configured as 960 KVA for Data Centre 01 and 930 KVA for Data Centre 02; the run time is 10 minutes per UPS at 98% load, which is variable to the level of applied load. Every 3 months the level of applied load and characteristics are examined on the UPS.

Security systems

The facility is protected by a Siemens Alarm combined intruder and door access control system, utilising door contacts and dual technology movement detectors, which all report back to a centralised Siemens system with its onward connected signalling. Access is controlled by HID proximity fob readers with entry into the Data Centre by combined individual fob and PIN code. In addition, a digitally recorded CCTV system is installed with cameras viewing all entrances into the Data Centre. All information recorded by the system is downloaded and stored on to a hard disc digital recording system. The systems are maintained by Computer Protec and are checked at six-month intervals. Computer Protec provide JT with reports of maintenance visits detailing the status of the system and highlighting any errors found. As well as CCTV, JT Data Centres have twice nightly security patrols which changes to 4 times per day on Saturday and Sunday.

Fire detection

First Tower Lane Data Centre is protected by a sophisticated particle detection system, the Very Early Smoke Detection Apparatus (VESDA) LaserPLUS system has been installed. This system detects fire at the earliest possible stage by drawing in air through a network of air sampling pipes. The detection chamber uses a Class 1 laser to achieve the optimum response to a vast range of smoke types. Using unique detection principles, the LaserPLUS has a sensitivity range of 0.005-20% obscuration/m. These systems are constantly monitored by our Network Operations Centre (NOC).

Gas suppression

In addition to protection provided by the VESDA laser system, the Data Centre is equipped with an FM-200 Fire Suppression agent. FM-200 has zero ozone depleting potential, and is typically deployed where an electrically nonconductive medium is needed, and people compatibility is an overriding factor. FM-200 is a colourless, liquefied compressed gas. It is stored as a liquid and dispensed into the hazard as a colourless, electrically nonconductive vapour that is clear and does not obscure vision. It leaves no residue and has acceptable toxicity for use in occupied spaces at design concentration. FM-200 does not displace oxygen and therefore is safer for use in occupied spaces without fear of oxygen deprivation. FM-200 is chosen to protect occupied areas such as computer rooms and the telecommunications market, as it out performs the majority of other gaseous systems in terms of speed of reaction to fire. FM-200 is effective within 10 seconds of initial discharge.



Telecommunication connectivity

The facility has been designed to provide complete network diversity to avoid any single point of failure. To this end, services are fed into the building from two separate routes. Fibre and connectivity services are fed into the building from two separate routes and Points of Presence (POP's). The facility is connected to the JT network and as such the complete JT portfolio of connectivity services (both fibre & copper) is available and includes all types of Private Circuits, ADSL services, telephony lines and high-speed, low latency Internet Backbone services.

Benefits and features

- Fast and effective
- No significant reduction in oxygen levels
- Clean gaseous agent leaving no residue
- Zero ozone depleting potential
- Short atmospheric life span
- Electronically non-conductive
- Safe for use in fully occupied areas
- Extensively tested, recognised and approved worldwide

Lightning protection

Soil resistivity testing was conducted as part of the design to establish the most suitable earthing system for the particular ground conditions. The lightning Protection system complies with BS 6651-1999 Protection of structures against lightning and BS 7430 "Earthing".

Service Level Agreement

A standard Service Level Agreement is included with this service (see JT Colocation Service Level Agreement.)

Terms & Conditions

The JT Colocation and JT Data Services available at this facility are provided under and subject to, the JT Colocation and JT Data Services Terms & Conditions of Service. Customers are strongly advised to read these Terms & Conditions on our website, before applying for the Service.

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