

Vialtus Solutions data centres – ServerBank™



ServerBank™, Vialtus Solutions' Manchester data centre is located in the heart of the City Centre within easy access of all major transport links. Situated in a decommissioned Bank of England building, this former bullion vault has been converted into a premium data centre. It offers an extremely high level of physical security and resilience to keep hosted systems online. The data centre is manned 24 hours a day 365 days a year by experienced professional systems engineers, skilled in both networking and operating system technology.

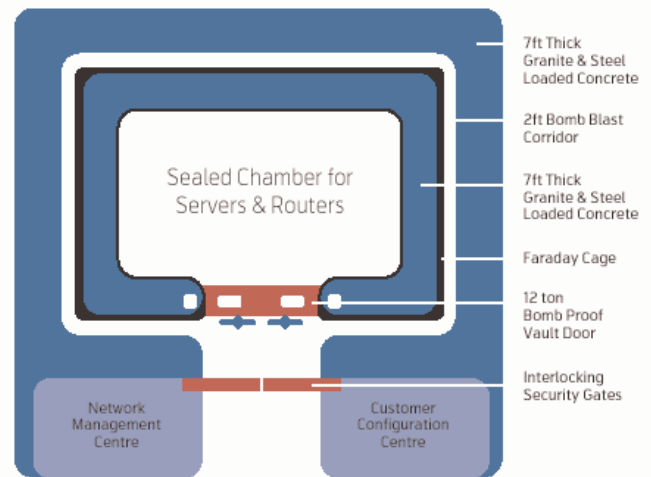
SECURITY

ServerBank™ is monitored with over seventy cameras through Vialtus Solutions' own security bridge, housed within the building. The buildings' old bullion vault provides the housing area for the servers and has over thirty cameras within it, designed to avoid blind spots.



Secure access to the Managed Hosting Suite.

Access is gained via two interlocking gates – the inner gate cannot be opened unless the outer gate is closed. In between the two gates is a 12 ton bomb proof vault door, which can be closed air tight in the event of a fire to enable the gas suppression system an optimum working environment. The inner vault is surrounded by 7ft thick granite and steel loaded concrete walls, which in turn are surrounded by a 2ft bomb blast corridor and a set of further 7ft thick granite and steel loaded concrete walls. The vault is below street level and is sealed against flooding.



The ultra-secure bomb proof design of the vault provides one of the most secure hosting facilities in the UK.

FIRE PROTECTION

The vault area is monitored by a Vesda system. This system detects the sub-micron particles that are released during the very early stages of a fire. Fire suppression is provided by an Inergen Gas system, with detectors and outlets positioned both beneath the floor and on the ceiling. These detectors also extend to the generator and car park areas of the building above the data centre.



The Inergen fire suppression system instantly eliminates the threat of fire or smoke damage.

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An alarm sounds when the material within the data centre begins to warm up, alerting the data centre staff to any potential issues before a major problem occurs. This alarm is connected directly to the Greater Manchester Fire Department whose nearest station is located less than one mile away.

The system is staged on three alerts; one immediately a problem is detected, through to 30 seconds later when the gas is released. The Inergen gas released is converted to 75% carbon dioxide, which suppresses any fire within the vault area.

POWER

The supply is distributed from the Manchester City Centre ring main, routed through a Vialtus Solutions owned step-down transformer providing 11Kv. The UPS is provided via eight parallel 120Kva battery units sharing the load current equally. This provides 480Kva to the data centre with 100% redundancy and has an instantaneous electronic change-over switch. In the event of a power failure this UPS system provides full load for 3 minutes until the generators come on line.



Diverse power feeds ensure multiple resilient supplies can be fed to cabinets.

ServerBank™ has three diesel generators, which are synchronised to mimic the mains supply. However, only two of the three generators are needed to supply full load to the data centre. The generators are 880Kva three-phase and at least 36 hours (17000 litres) worth of fuel is held on site.

Each rack within the data centre can be provided with; 16Amp (single, double or triple redundancy); 32Amp (single, double or triple redundancy) or three-phase redundant supply all connected via 'commando style' sockets.

All electrical systems within the data centre are monitored, maintained and installed by our own internal electrical engineers.

CLIMATE CONTROL

This is provided by six Airedale fan coil units complete with two supply air fans, cooling coil and three compressors. The cooling capacity of each unit is 122kw giving a total capacity of 624kw of cooling. The units are linked to roof mounted condensers each with three circuits of gas and liquid refrigerant. The control of the units is all-integral using the return air temperature to stabilise the air condition.

The air is discharged into the floor void where it is drawn through the cabinets to provide suitable cooling. The return air is pulled from the room into the fan coil unit, where it is cooled and the cycle is repeated. Only three of the six units are in use at any one time leaving three redundant.

The units cool the data centre to regulate the temperature between 18° and 21°C. Alarms alert the data centre operations staff to temperature and humidity problems.

FLOOR

The floor is raised above flood level with sump pumps providing extra protection if required. The floor is rated at 1000kgs per sq meter and houses data cable trays and power conduits to ensure data is separated from power.



The infrastructure has been built to the highest modern standards using the best hardware and suppliers.



ISO 27001
IS 515304

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