



## UKS North Datacentre – Studley

### Dedicated managed environment for mission critical services

After a decade of success, demand led to expansion and the need for a new facility. 2008 saw the unveiling of our 'UKS North' facility, tailored from a design with features as close to Tier IV specification as our UK location can practically accommodate. The facility boasts a bespoke design – built from the ground up to provide reliable and efficient hosting solutions to our growing number of clients.

# UKSolutions

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### Our datacentres are the core of our business.

With 10 years of continual operational life, the Studley campus has a proven track record of delivering availability to clients with the most demanding applications, complemented by our connect, secure and support services.



### Introduction

A broad portfolio of hosting solutions available at our datacentres ensures our customers receive maximum value through a careful and considered choice of space, with the peace of mind that the opportunity to expand exists. Our hosting services range from a single server though to dedicated racks, energy efficient “pods” and private suites, all delivered with exceptional physical security and environmental resilience.

### Standard Co-location Services

Our datafloors are where our clients visit most often. All are fitted out with the latest cooling, fire prevention and power distribution equipment which are described later in this datasheet. The five datafloors span two buildings on our Studley campus, with the most recent space in UKS North designed to deliver a fault tolerant N+N environment and power services balanced with energy efficiency.

UKS North Services	1kW (4A) Quarter Rack	4kW (16A) Full Rack	8kW (32A) Full Rack	Dedicated Suite
Service Lead time	1 Week	1 Week	1 Week	12 Weeks from order
Size (HWD)	445x600x1050	1900x600x1050	1900x600x1050	220 m <sup>2</sup> usable suite Options to partition smaller spaces
Rack unit equivalent	9U	42U	42U	-
Power receptacles per supply	UK 13Amp	16Amp 3 pin BS4343 “Commando”	32Amp 3 pin BS4343 “Commando”	-
Power delivery	A+B each with 100% rating			

### Cooling

Heat is an enemy to reliable data storage. It is essential that the datafloors are kept at the optimum temperature to ensure integrity of data and to avoid problems.

The environment within each datafloor is constantly monitored through an array of temperature and humidity sensors, alerting us to any potential problems before your data is affected. Each datafloor in UKS North has been equipped with two systems, each with sufficient cooling to maintain a consistent temperature. Each system is precisely replicated to ensure cooling even in the event of a complete failure of one system. Suites in UKS North utilise energy efficient ‘dry coolers’ with ambi-cool technology. This uses the ambient external temperature to deliver cooling when possible, reverting to standard refrigeration technology on warmer days. To harness the environmental savings through this latest air conditioning technology, our suites are arranged in innovative enclosed “pods”, forcing maximum amounts of cold air into hosting racks and expelling warm air into the cooling equipment.

## Power

Harnessing and maintaining power is at the very core of delivering our service to clients. All of the technology we possess would be rendered ineffectual without a continuous, uninterrupted supply of power, so we have designed our facilities with this in mind.

Our site is connected directly to the national grid via two 11kV connections, each fed from separate sub-stations as it pays to plan ahead with power. The UKS North site uses two independent critical power distribution systems per datafloor ensuring your equipment is protected in the event of any unexpected incident and to allow us to carry out an extensively planned preventative maintenance programme.

Each system is backed up through battery UPS and generators. We consider every eventuality and alongside fuel supply agreements and routine maintenance programmes we even store enough fuel on-site for one week's performance.

## Security

Data security requires robust management and we are focused on delivering this. You will appreciate that we are unable to elaborate in too much depth about our internal processes online, however you can be assured that we have the most stringent arrangements implemented. Amongst the measures we take to protect our clients are anti-ram bollards designed to stop a truck situated around the sites' perimeter, 24/7 CCTV, perimeter fencing, manned guarding and access to site limited to pre-booked access requests with a requirement for Government issued ID for verification. These alone show why we'll help you pass any audit you may wish to conduct with flying colours.

With the physical threat controlled, our security focus continues to the data. Our technical team include security specialists deploying and maintaining the very latest appliances and two-factor authentication products. The only partnerships we maintain are with similarly leading providers - a testament to the quality of our deployments.

## Fire Protection

We take the risk of fire very seriously. Cutting-edge fire detection systems are situated throughout our locations and all procedures are designed to highlight and minimise any potential risk.

Both our facilities utilise building wide, multi-zonal fire detection systems with both ionisation and optical detectors in suites, roof cavities and sub-floors. To some this would be enough, but for complete peace of mind, on top of this we've gone even further and installed VESDA aspirating smoke detectors, which are able to detect fires before they flare, allowing the best possible opportunity to detect and control the spread of fire before it can take hold.

In the unlikely event that a fire should get past all our detection systems and flare, it will be suppressed using FM-200 Heptafluoropropane agent, ensuring any risk to your data is negligible.

## Support Services

We offer complete peace of mind. We have found seamlessly combining our support services has been the best means to successfully get the job done for our customers and we're confident you will find us hard to beat.

Our technical teams boast wide ranging skill sets, specialising in two important areas: systems support and network and security solutions. Each team member is equipped to lend their assistance in a huge variety of situations, but chiefly concern themselves with software and hardware platforms, firewalls, network hardware and connectivity solutions. You can count on us to support you at any desired level, from simple ad-hoc programmes which allow for effective and efficient budgeting, to infrastructure management for the ultimate assurance that your critical services are in hand.

Our continued success allows us to extend to all our customers competitive rates on the purchase and lease of equipment and hardware, taking advantage of our reduced vendor costs and enhanced service relationships to complete the UKS managed service offering.

## Environmental Considerations

Our business is important but so are our social responsibilities. We are committed to making decisions that minimise our impact on the environment.

We actively encourage our key suppliers to follow our lead and help our customers pursue their environmental strategy. The UKS North data centre offers high specification hosting space, utilising the very latest energy saving equipment and technology to reduce the environmental impact of our critical systems.

## Facility Amenities

We understand the needs of our customers and endeavour to provide you with a comfortable environment, conducive to stress-free working. When you are working on-site, you will have access to thoughtfully positioned and carefully maintained rest areas with hot and cold drink facilities and somewhere quiet to get away from it all. When you need to refresh, we have male and female showers - our aim is to make you feel as at home as possible whilst you're onsite.

You are free to use our wireless network and our location's proximity to the motorway network makes us easy to find, with plenty of local accommodation available if required.

## Technical Specification

<b>Building Specification</b>	
Technical (hosting) Space	930 square metres (10,000 square feet) delivered as up to 500 foot-prints
Floor Loading	5kN per square metre
Building	Technical space split over two floors with two suites per floor
Other Amenities	Site security desk and office, service lift, linkway to UKS South at high and low level. Meeting room and other offices
Provisions for extended on-site working	Customer rest area equipped with welfare amenities, toilets and showers
<b>Power Specification</b>	
Power Specification	2.5kW/M <sup>2</sup> per system, A+B systems for resiliency
Utility Supply	3.8MVA 11kV Supply delivered via dual cable arrangement from Studley and Redditch substations
Core Distribution	2 x 2MVA Transformers feeding A and B supplies
Backup UPS	Two independent systems per floor comprising of 5 x 200KVA units per system to provide true diverse feeds and protect customer equipment during transfer to generators
Generators	2 x 1MVA prime rated diesel generator systems at launch, up to 5 parallel (4+1 spare) in line with load requirements
Generator Autonomy	115,000 litres fuel (1 week) with fuel supply agreements
Power per Footprint	Suites designed to average 4kW per footprint
<b>Environmental Specification</b>	
Cooling - Specification	2.5kW/M <sup>2</sup> load (resiliency through per system A+B systems, 26±2°C). Target 27°C inlet air in-line with best practice.
Cooling - Air Handling	12 x 42kW net air handling units per suite arranged in A+B systems at 100% capacity per system into pressurised floor
Cooling - Chillers and Redundancy	2 x 300kW energy efficient "dry coolers" with ambi-cool technology per suite arranged in A+B systems at 100% capacity per system
Monitoring	Suite based centrally managed Building Management System, with monitoring including: temperature; leak detection; occupancy; sound levels; and BMS input from air-handling units, fire systems and other local M&E equipment.
Lighting	Environmentally aware occupancy based lighting with minimum lighting "always on". No external windows to suites.
Fire Detection	Building-wide fire detection with suite based multi-zones with both ionisation and optical detectors in roof, data floor and raised floor VESDA aspirating smoke detectors
Fire Suppression	FM-200® Heptafluoropropane agent
Access	Site perimeter control with "pod" style anti-tailgating doors between building reception and secure areas
Site Security	24x7 On-site security Full alarm system monitored 24x7 PAC access control system with audit logs and formal documented site access policy Internal and external CCTV with up to 90 days of motion activated capture
<b>Other Network Provision</b>	
Roof Space	Apparatus for satellite and radio equipment subject to planning
Site Fibre Providers (Deliveries via independent ducts)	BT (Stratford, Ipsley & Redditch Headless Cross exchanges), Virgin Media [ntl & Telewest connections] (Studley, Bromsgrove & Kings Norton exchanges) NEOS Networks Fibre Accessible - <a href="http://www.neos.net">www.neos.net</a> GEO - <a href="http://www.geo-uk.net">www.geo-uk.net</a>
Other Telecommunications Access	Global Crossing (Fibernet) via Birmingham, Telehouse East or Sovereign House POPs, Interconnect to carriers in: Telecity London/Manchester and Telehouse London via UKS Connect service

## Tier Comparison

	Tier III	Tier IV	UKS North Tier
<b>Telecommunications</b>			
Diversely routed provider entrances – minimum 20m separation	Yes	Yes	IV
Multiple access providers	Yes	Yes	IV
Multiple routers and switches with redundant power supplies	Yes	Yes	IV
<b>Environment</b>			
Outside Extreme Flood Zone	Yes	Yes	IV
Rest areas and break room	No	No	Customer rest area & showers
<b>Security</b>			
Lobby to data floor protected by single person interlock (mantrap) designed to prevent piggyback or passback	Yes	Yes	IV
No exterior windows to data floors	Yes	Yes	IV
Entrance lobby and service corridors	Yes	Yes	IV
Security counter & office in lobby	Yes	Yes	IV
Building perimeter, data floor, security and operations doors by access token	Yes	Yes	IV
CCTV coverage: perimeter, parking, generators, access controlled doors, data floors at 20 frames/second minimum with digital storage	Yes	Yes	IV
24x7 Manned site security	Yes	Yes	IV
<b>Power Systems</b>			
Generator proximity to data floors	2 hour fire separation	Weatherproof enclosure or separate building	IV
Generator fuel capacity at full load	72 hrs	96 hrs	IV
Generator sizing	Data floors + 1 spare	Total building + 1 spare	IV
Utility service	Dual feed (>=600V)	Dual feed (>=600V) from different substations	IV (Site dual fed 11kV from different substations)
Switchgear specific ion (Any switchgear in distribution system can be shutdown for maintenance with by-passes without dropping the critical load)	Fixed air circuit breakers or fixed molded case breakers.	Drawout air circuit breakers or drawout molded case breakers.	IV (Drawout circuit breakers)
UPS topology	N+1	2N	IV
UPS power distribution voltage	120/208V	120/208V	NONE (230/400V UK)
<b>Cooling Systems</b>			
Sufficient dry coolers to maintain critical area during loss of one power source	Yes	Yes	IV
Sufficient pump sets maintain critical area during loss of one power source	Yes	Yes	IV 2(N+1)
Dual path piping system	Yes	Yes	IV
Sufficient air handlers to maintain critical area during loss of one power source	Yes	Yes	IV
<b>Fire Systems</b>			
Fire detection system	Yes	Yes	IV
Gaseous suppression system (NFPA 2001 clean agent)	Yes	Yes	IV
Early warning smoke detection	Yes	Yes	IV

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Data Matters