REDCENTRIC

COLOCATION SERVICE – HARROGATE DATA CENTRE SERVICE DEFINITION

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1) SERVICE OVERVIEW

Redcentric offers secure data centre environments for business critical systems with fully redundant power, cooling, security and network – all supported and maintained by expert technical staff. Redcentric provide the Colocation Service to Customers that value their network and system availability, and choose not to build, maintain and secure their own facility.

Colocation services provide a cost-effective way of securely housing business-critical IT systems and infrastructure, together with the provision of reliable and fast access to the internet or wide area network.

Redcentric's Colocation Service offers a range of configuration options, from fully secure lockable pods through to private suites customised to the Customer's specific requirements. Technical support is provided by way of remote hands and eyes support, but can be tailored to meet advanced requirements, such as hardware procurement and installation.

Features

- Geographic Diversity - Data centres in London, Reading and Harrogate.
- Private Suite - Variable-sized secure suites to host multiple pods.
- Colocation - Lockable pods within fully secure Colocation rooms.
- Physical Security - Employment of strict security policies complemented with card readers and video surveillance providing full audit control and logging.
- Redundant Power - Redundant UPS with automatic transfer to permanent onsite generators with power configured to an N+1 standard.
- Heating, Ventilation & Air Conditioning (HVAC) - Installed to N+1 standard, providing a monitored consistent temperature and humidity environment.
- Diverse Fibre Entry - Diverse fibre entry into the data centres and multiple common raisers to diversely located telecommunication "meet me rooms" from multiple carriers.
- Security - State of the art physical and access security, including and photo ID cards, restrict access to the data centres.

2) SERVICE DESCRIPTION

The Colocation Service comprises of the provision of space, power and cooling within Redcentric's Harrogate data centre. The Customer can choose from the following options:

- **Single Cabinets —** the Customer is provided with a standard 19" cabinet with sidewalls, and front and back locking doors. The cabinets are located in shared areas within the Redcentric data centre, which are accessible by other Redcentric customers.
- **Private Suite –** the Customer is provided with a number of individual cabinets with layout and power options tailored to the Customer's specific requirements.

The following facilities and systems are used to support the Harrogate Redcentric data centre:

- Redundant air conditioning system.
- Physical access to each Redcentric data centre is strictly controlled.
- Early fire detection system and fire suppression.

As standard, the Colocation Service offers the following:

- Installation of the cabinets within the Redcentric data centre.
- Installation and provision of two power supply feeds.
- Access by the Customer at any time (24 hours a day, 7 days a week)

Additional service options are excluded from the standard service delivery, but can be purchased at an additional charge:

- Provision of power bars
- Additional hands and eyes

Additional service options incur additional charges.

2.1) COLOCATION SPACE FEATURES AND SPECIFICATIONS

Colocation is a section of data centre space, enclosed by partitioned perimeter, secured with proximity security and monitored by CCTV. Colocation facilities feature fully enclosed lockable data cabinets for customers who do not require the space within a Private Suite to house their equipment. Managed network connections can be provided to this equipment, as well as other managed services.

2.1.1) Cabinets

Redcentric's Colocation Service provides fully-enclosed lockable metal cabinets that provide physical isolation and increased security for the Customer's equipment. These cabinets provide front and rear access for ease of installation of equipment.

2.1.2) Specifications

The specifications for cabinets used for Redcentric Colocation Service are:

- Cabinets are 600mm (W) x 980mm (D) x 42U
- 19" rack (Wide)
- 42U rack mount units (High)
- 2 x rear-mounted cable management trays
- Front and rear removable doors with combination locks
- Installation and provision of two power supply feeds
- 1 x on-line power measuring unit
- 2 U at cabinet rear may be used by Redcentric for power monitoring

Although both supplies are energised under normal circumstances, Redcentric only considers power to be unavailable when neither supply is energised; please see the Service Level section for details.

Power in excess of the Master Services Agreement (MSA) is not guaranteed and might require for the Customer to contract for additional cabinets. Power is only guaranteed up to the contracted amps of power. If Redcentric determines that excess power is being drawn without agreement, Redcentric will insist that consumption is reduced. Under extreme circumstances Redcentric may switch-off equipment and provide retrospective notice in order to protect the infrastructure for all clients.

2.1.3) Customer Equipment Rotation

Customers are advised that all equipment must be rotated in the cabinets to ensure that hot air is vented into the data centre hall. Equipment must be installed leaving no spaces, or leaving spaces of exact U's only. Any spaces left will be filled in with blanking plates to prevent mixing of hot and cold air and to increase the thermal efficiency of the data centre. Redcentric take no responsibility for the Customer's equipment failure caused by overheating where said equipment has not been installed in accordance with the instructions contained within this document or agreed in advance with the data centre management.

2.2) POWER PROVISION

- Power to cabinets has been provisioned using two x C32, 16 or 32amp x 220/240v blue commando sockets
- Sockets are not accessible to the Customer
- Each socket provides true diverse A & B power feeds
- Dual power feeds are designed to provide redundancy for maintenance of the Customer's equipment and Redcentric delivery infrastructure
- Power is defined in the Service Level section
- Each cabinet feed is monitored for power consumption and load
- Power monitoring is completed at the distribution board with no monitoring infrastructure required within cabinets
- Power strips are not provided but can be purchased from Redcentric
- Customers are recommended to use power strips rated to 32amps designed for data centres
- Customers can use power strips rated to 16amp Redcentric can supply C32-C16 adaptors
- Any cabinets using a 16amp power strips will be fused at the power distribution units (PDU) boards as agreed in the MSA or 16amps, whichever is the minimum
- Any Customers using 32amp power strips will be fused at PDU boards as agreed in MSA or 32amps, whichever is the minimum
- Vertical or horizontal power bars are permitted
- Power cannot be cross fed between cabinets; any cross feeding will result in the cabinets being powered down at distribution board level without notice

2.2.1) Cable Standards

Redcentric's Harrogate data centre is a fibre/cat6a facility and Customers have no access to the overhead cable trays. Provision within a cabinet or between adjacent cabinets can be provisioned in cat5e where the provision does not use the overhead cable trays. Cabinet doors must be shut, cables between cabinets must either be run in the overhead trays (cat6a/fibre) or inside the cabinet frames where the dividing panel has been removed (cat5e, cat6a/fibre). Any cabling preventing doors from shutting or deemed to be a safety risk, or presented in an overhead tray without the express permission of Redcentric will be removed without notice by Redcentric.

Provision of telephone lines is into the BT cabinets within the Redcentric meet me room and the delivery of the telephone lines from the BT meet me room is completed by Redcentric. Provision of all cross connect cables between cabinets not adjacent to each other is subject to charges. Cross connects can only be laid on acceptance of the quotation and with an order number.

2.2.2) UPS Provision/Mains/Generator

Redcentric's Harrogate data centre has uninterruptible power supply (UPS) provision covering the A&B power streams to the cabinets and this may be present on either, nether, or both streams during periods of maintenance. Redcentric class its self-power generation using its 3 x 1.25mva generators as its primary power source and will use its self-generation of power without notice in support of the data centre and in the export of power to the National Grid. Customer local provision of cabinet mounted UPS is allowed but not recommended or deemed as required. Any local provision of rack mount UPS must be approved in writing by Redcentric before provision. Redcentric will inform the Customer of any loss of resilience in the data centre due to maintenance, disruption of grid supply or equipment failure.

100% power provision is deemed to be maintained if power is available across either the A or B string. Redcentric make no warranty of 100% power availability across both A&B feeds simultaneously. Redcentric recommend that the Customer fit automatic transfer switches (ATS) to protect equipment that contains a single power input. Redcentric recommend ATS switches supplied by APC. Redcentric take no responsibility for loss of colocated equipment due to the disruption of either the A or B power supply provided that either the A or B supply has been available.

2.2.3) Cooling

Redcentric's air conditioning equipment is specifically designed to support typical computer room environments. These systems are designed to provide a constant temperature and humidity. All rooms within the data centre operate redundant air handling units and particle filters are installed to keep dust contamination to a minimum.

2.3) ACCESS & SECURITY

Redcentric's Harrogate data centre is operated as an audited compliant and registered data centre under ISO27001 & PCI security standards. The standards define the retained period of the security data held, the access procedures to and the method of operation of the data centre. Customers agree to the security process and procedures in place. The security is divided into three aspects, physical security, electronic security and operational security.

2.3.1) CCTV

The data centre feature CCTV located at points of entry, including common areas. CCTV can be monitored centrally and remotely and the recording is digitally archived.

2.3.2) Access Procedures

Physical access to the data centre is divided into three groups, Redcentric staff, Redcentric Customers, Redcentric contractors. When an Redcentric Customer takes colocation cabinets at the data centre they are given one free of charge access card, which is defined against a specific person and is none transferable. The person assigned this card can make requests through the Redcentric portal for additional cards, subject to charge. Issue of cards in completed by appointment only.

2.3.3) Permanent access cards

- Customer advises Redcentric of name(s) for initial cards
- Redcentric set up Customer portal account
- Redcentric book appointment with the Customer for the issue of the security card, and issue the Customer with the ticket reference number from the portal to support the card issue
- Customer attends site at the appointed time with photo ID quoting the Redcentric ticket number
- Redcentric issue the card
- Redcentric releases portal log on details to the Customer against the first access card with admin rights

The Customer can now make requests through the portal for additional cards, subject to charge, throughout the lifetime of the MSA. Each issue follows the appointment and issue procedure. Customers are notified in the first week of January each year to provide Redcentric with a list of names and card numbers for all cards held. Any cards not advised by the 31st January each calendar year are auto expired without exception. Once granted access cards provide the registered keeper of the cards access without notice to the data centre at any time night or day seven days a week. It is the express responsibility of the Customer to inform Redcentric of any cards that require disablement.

2.3.4) Temporary Access

The Customer may arrange at any time for temporary access to the data centre for their staff or persons working on behalf of the Customer. Access is granted free of charge where notice of the request is given to Redcentric at least 24 hours in advance. If less than 24 hour's notice is given, access will be chargeable at Redcentric's current standard rate. The Customer requests access using the access request form in the Customer portal specifying date am/pm and name(s) of those requiring access

- The Customer issued with a ticket number for the access request
- The Customer or the Customer's representative arrives
- The Customer must quote the Redcentric ticket number to the reception staff
- ID checked must be photo ID government issued
- Temporary access card issued giving the holder rights for a 12 hour period

There are no exceptions to the above procedure. Failure to present ID, presenting incorrect ID, or not knowing the ticket number will result in access to the data centre being declined. Staff on site have no authority to create access tickets on behalf of the Customer.

2.3.5) Allowed Areas

Customers or contractors found in areas of the data centre not authorised by their access arrangements unless accompanied by an Redcentric staff member, or exiting the building as a result of an evacuation event, will be asked to leave the data centre and may be subject to a complete ban and/or formal investigation.

2.3.6) Third party supplier arrangement

Where the Customer requires the services of third party suppliers and the supplier is providing a service for the Customer's equipment contained within the Customer's cabinet - for instance a vendor engineer is to service a switch - access is obtained under the standard process. If the Customer is requesting a third party supplier to bring in services to the Customer's equipment from outside the Customer's cabinet, then express permission must be obtained before installation is attempted. Each third party will have its own specific requirements and associated costs. Instances that fall under this category are:

- BT/other telephone/WAN services
- Inter Customer cross connects
- Any services requiring under floor access
- Any services requiring above cabinet tray access
- Any services transgressing other Customers space
- Structured cable installers

2.4) FIRE SYSTEMS

Redcentric's Harrogate data centre has highly sensitive, early detection and warning systems installed, which automatically notifies Redcentric to any possibility of fire. This early warning places the system into alert mode for further detection to be completed. Suppression of fire is achieved via gas.

2.5) THIRD PARTY CIRCUITS

Customers utilising Redcentric's Colocation Service (either cabinets or private hosting suites) can also utilise Redcentric managed network services to connect remote sites. Redcentric appreciates that there are occasions where Customers may need to supply their own circuits into hosted cabinets, for example where the Customer has a wide area network provided by another supplier. Therefore, with prior written agreement by Redcentric, the Customer is able to order circuits from third party suppliers directly into their colocated cabinet(s).

The process for placing such an order is outlined below:

- The Customer places an order with the circuit supplier, listing themselves as site contact and providing the cabinet reference number and address as the circuit termination details.
- Circuit supplier will typically request site access for planning via the Customer. The Customer will log an access request with Redcentric support team on behalf of the circuit supplier and submit written request for the circuit install, identifying the circuit requirements and authorisation for the install. Redcentric will approve the request and retain until circuit decommissioning takes place.
- Circuit supplier will visit the Redcentric site and plan the circuit installation. This will involve identifying routes into the building, capacity, etc. and will be performed in consultation with an Redcentric facilities representative.
- Circuit supplier will require a number of visits during the circuit installation to cover install works, final fit and testing. This will be coordinated through the Customer with access requests logged by Redcentric support. All visits will be escorted by an Redcentric support or facilities representative.
- Circuit supplier will confirm circuit completion to the Customer.
- The Customer will then commission their equipment on the circuit and test.

It important to note in these scenarios that:

- The Customer will be responsible for monitoring and managing the circuit and logging any fault calls with the circuit supplier.
- The circuit will be terminated within the Customer's colocated cabinet.
- Redcentric can supply an automatic power switch for circuit termination equipment that has a single power supply to provide resilience against power feed failure; this will incur an additional charge.
- It is the responsibility of the Customer to request access on behalf of the circuit supplier for any site visits. Redcentric will refuse access to the circuit supplier if they cannot provide a valid access request or suitable identification.
- It is the responsibility of the Customer to cancel the circuit if they subsequently cancel the Redcentric hosting service.
- Redcentric will provide reasonable access to a circuit supplier in a fault scenario, but an access request will still be required.

2.6) CUSTOMER SUPPLIED CABINETS

- The Customer may use Redcentric provided cabinets, or it may be possible for the Customer to supply their own cabinets and have Redcentric facilities team install them. This will be treated as a bespoke request and will incur a non-recurring set-up charge for such items as power installation and electrical earthing.
- If cabinets are larger than the Redcentric standard size, additional recurring charges will apply to cover the additional floor area used.

2.7) REMOTE HANDS AND EYES SUPPORT

Remote hands and eyes support is engineering resource to support the Colocation Service Customer when they require on-site activities to be performed on their behalf. Examples of work undertaken include the following:

- Restarts and power re-cycling of Customer-managed equipment
- Visually inspect any equipment or cabling and report on its state to the Customer, such as messages on console or audible alerts
- Interface card, hard drive and disc swaps (hot swaps) which are available only if the hardware has been supplied by the Customer and accessibility to perform the action is from the outside of the casing; a hot swap is defined as a swap that can be performed without having to open the casement
- Software reboots
- Swap, connect and/or re-connecting of existing data cables
- Hard re-boot
- Rack up / rack down
- Replace / remove a cable / hard drive / dongle / power supply / fuse
- Swap a port or LAN card
- Check for power

The Colocation Service includes 15 minutes of hands and eyes support per cabinet per week, at no additional charge. This support is allocated on a per individual cabinet basis and cannot be aggregated across multiple cabinets, i.e. Customer cabinet 1 is allocated 15 minutes and thus it cannot be used on Customer cabinet 2 etc. Hands and eyes support will have to be taken in each week, i.e. hands and eyes support allocation cannot be carried over to the next week. Redcentric may at its discretion agree to carry out additional hands and eyes support over and above the allocation, if so requested by the Customer, subject to additional charges.

Other than the categories of work listed above, Redcentric will not undertake other tasks by way of hands and eyes support. For the avoidance of doubt, such exclusions include the following:

- Interface card swaps when the card is not accessible without removing the equipment casing.
- Loading/reloading of software
- Intelligent trouble shooting of the Customer's equipment
- Any form of cabling either between cabinets or suites
- Hardware installations
- Equipment and/or software configurations
- Any form of inventories

Redcentric may agree to carry out tasks requested by the Customer that are not part of hands and eyes support, by arrangement and subject to additional charges.

3) IMPLEMENTATION AND ACCEPTANCE

3.1) ACCEPTANCE CRITERIA

The following Acceptance Criteria apply to the Colocation Service:

- Provision of the contracted for number of cabinets and allocated power delivered via an A and B feed
- Receipt of access procedure document
- Key/combination lock details provided to the Customer
- Provision of power supplies
- Provision of ATS switch if ordered as part of power provision

4) SERVICE LEVELS AND SERVICE CREDITS

4.1) SERVICE LEVELS

Redcentric has designed its Harrogate data centre facility to offer a highly secure and resilient environment. The facility is designed and built to a standard and consistent specification, which enables Redcentric to commit to the Service Levels on the following key elements:

- Electrical power to any bus bar of any PDU system located within the data centre to which the Customer's equipment is connected. For the avoidance of doubt this covers up to and including the female C32 socket presenting the A and B power to the cabinet but excludes any cabinet mounted power bars or fuses contained within the power bars or the power leads from the power bars to the C32 socket.
- The ambient room temperature in the private hosting suite or colocated rack will remain between 20°C and 27°C. The average relative humidity in the private hosting suite or colocated rack shall be between 30 and 55%.

4.1.1) Power

Redcentric will provide reports to the Customer detailing any interruptions to the power supply and the duration of such interruptions. For the purpose of those reports, the start time of a power incident (the incident start time) shall be defined and measured from the time the failure is detected by Redcentric or is reported by the Customer to Redcentric, whichever is the earlier. The end time of a power incident (the incident end time) shall be defined as the time at which the power supply can be demonstrated by Redcentric to be available at the PDU bus bar.

Each cabinet is ordinarily provisioned with two separate feeds, A and B. Power is only unavailable when neither supply delivers power. Customers should deploy equipment that has dual supplies where possible and connect one to the A feed and one to the B feed. For single supply devices, the Customer should consider deploying an automatic switching unit. These units connect to both the A and B feeds and offer a single powered output as long as either the A or B feeds are available. An interruption of only one of the feeds (A or B) is not an interruption of power.

4.1.2) Environment

Redcentric shall provide reports to the Customer detailing any deviations from the defined ambient room environment Service Level. For the purpose of those reports the start time of an environment incident (the incident start time) shall be defined and measured from the time the environment Service Level deviation is detected by Redcentric, or is reported by the Customer to Redcentric (whichever is the earlier). The end time of an environment incident (the incident end time) shall be defined as the time at which the environment can be demonstrated by Redcentric to have returned within the Service Level parameters.

The Service Level applicable to the Colocation Service is as follows:

Service Level: Availability of electrical power Measurement Period: Month	
Measured element	**Availability / within tolerance**
Electrical Power	Availability: Not less than 99.95%
Ambient Room Temperature	Within tolerance not less than 99.95%
Ambient Room Humidity	Within tolerance not less than 99.95%

Electrical power is unavailable when a qualifying fault has occurred and the qualifying fault is still continuing at the time of reporting by the Customer or identified by Redcentric. The period of unavailability is the time to restore (TTR) for the qualifying fault. The TTR for each qualifying fault is the time from the Customer notification to the time when the fault is rectified and the Colocation Service is restored. At all other times the electrical power is deemed to be available.

Temperature and humidity are outside tolerance when a qualifying fault has occurred and the qualifying fault is still continuing at the time of reporting by the Customer or identified by Redcentric. The period outside tolerance is the time to restore (TTR) for the qualifying fault. The TTR for each qualifying fault is the time from the Customer notification to the time when the fault is rectified and the temperature or humidity (as the case may be) is once again within tolerance.

4.2) FLOOR SERVICE LEVEL

The Floor Service Level applicable to the Colocation Service in respect of (i) Availability of electrical power (ii) ambient room temperature being within tolerance and (iii) ambient room humidity being within tolerance shall in each case be 85% in any given Month.

4.3) SERVICE CREDITS

The Service Credits applicable to the Colocation Service shall be calculated as follows:

The formulae for calculating the Service Credits shall be:

4.3.1) Availability of electrical power

Service Credit = (C x S) / MS

Where:

S = the number of seconds by which Redcentric fails to meet the Service Level for Availability in the relevant Month

C = total Charges payable in respect of the Colocation Service for the same Month

MS = total number of seconds in the same month

4.3.2) Temperature and humidity

Service Credit = C x S) / MS

Where:

S = the number of seconds by which temperature or humidity are outside tolerance in the relevant Month (and where both are outside tolerance at any time in the relevant Month, the aggregate number of seconds)

C = 10% of total Charges payable in respect of the Colocation Service for the same Month

MS = total number of seconds in the same month

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