



What is Colocation?

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Colocation, or Colo, is a core service offered by the majority of data centres, but, if you've never heard the term before, it can be difficult to find out exactly what it means.

So, in a nutshell, what is Colocation?



In the simplest terms, Colocation is a place where you can put computer hardware which needs to be accessible at all times.

The Colocation service provider ensures that your equipment is secure, powered up and kept at an optimal temperature. In some cases, they'll also provide network connectivity to your equipment.

What should you expect from a Colocation provider?

Typically, a facility will provide the following core infrastructure components:

- › A secure, physical location to put your equipment. This could be a rack cabinet, a cage of rack cabinets or a private room or suite.
- › Resilient power to keep your equipment running.
- › Cooling to keep your equipment running at an optimal temperature.
- › Fire protection and suppression to keep your equipment safe in the event of a fire in the facility.

Depending on the facility, you might also get the following options for network connectivity:

- › Use of an in-house network to provide connectivity to your equipment.
- › Cross-connects which give you the ability to connect with other businesses that are also colocating in the same facility.



You might've heard of data centre tier ratings; what's this all about?

Not all Colocation providers are created equal and, depending on the facility, some may have a different "tier" rating.

Whilst these tiers aren't governed by an official body or certification, they're terms thrown around in the industry which provide a basic understanding of the redundancy and tolerance of the overall facility.

Data centre tiers run from tier 1 through to tier 4, with tier 1 being the most basic and tier 4 being the most fault-tolerant and redundant.

Tier 1 facilities have a single path for all infrastructure including power and cooling services, with very few, if any, redundant capacity components.

Tier 1 facilities are considered to be the least reliable because an outage on any core part of the facility is likely to be service impacting on your equipment.

On the other hand, if cost is a consideration, the same lack of redundancy can make Tier 1 the cheapest option.

Tier 2 facilities have the same single path for infrastructure as you get in Tier 1. However, redundant capacity components are kept available so that planned maintenance doesn't affect uptime.

Tier 3 facilities have multiple redundant paths for infrastructure, allowing maintenance to go ahead without taking the facility offline, unless major works are required. This is typically known as N+1. For most small-medium sized businesses, Tier 3 offers the perfect balance between cost and redundancy.

Tier 4 facilities offer complete fault tolerance and full redundancy for all components. This is typically known as N+N. With Tier 4, you can expect no interruption of service for outages, whether planned or unplanned. Due to the high level of redundancy, this is typically the most expensive type of facility in which to house your equipment.

Although Tier 4 facilities are far more complex and fault tolerant than those in lower tiers, investing in this higher cost option might not be the best choice for your business requirements. Some Tier 3 facilities offer some Tier 4 benefits, but without the high Tier 4 cost.

Why choose Colocation over hosting in-house?

Why choose to pay to collocate your infrastructure when you could just put it in a dedicated place in your office or warehouse? There are a number of benefits to Colocation over in-house hosting:



The colocation environment is purpose-built to house IT infrastructure.

From the choice of cabling, right the way through to air filtering and security features, your equipment will be located somewhere designed to house equipment in the most efficient manner.

This has financial and environmental benefits, reducing costs and providing a more efficient use of IT infrastructure.



The electricity in a colocation facility is likely 'cleaner' than you'd typically find in an office or home.

Data centres make use of uninterruptible power supplies (UPS); as well as holding the power load in the event of power loss, they clean the output feed to your equipment.

If you were to monitor your office or home power feed, you'd find that the voltage fluctuates very significantly. In a data centre, the UPS reduces this fluctuation by increasing the voltage when it drops too low or reducing it when it's too high.

This 'clean' electricity gives benefits to your equipment, resulting in a longer life.





Another benefit of locating your infrastructure off-site, away from your business, is that you're able to continue operating even in the event of outages or issues in your office or home.

Employees are still able to access systems and do their jobs, while customers can still access websites and place orders.



Finally, Tier 3 and Tier 4 facilities are redundant by design.

This keeps your systems online in the event of a catastrophe, whereas creating and maintaining such an infrastructure at your office would require considerable time, effort and funding.

Colocation takes away these headaches as facilities have already been designed with business continuity in mind.



Why choose Colocation over cloud services?

With so much publicity around the Cloud, you could be forgiven for wondering why you'd consider Colocation. However, there are a number of reasons why Colocation can be more beneficial to your business over cloud services:



With Colocation, you know exactly where your data is held and who has access. You know the facility where your infrastructure is stored and its specification, so you can expect a certain level of uptime on your services.

With cloud services, you generally don't know who has access to the equipment or how secure the machines are where your private data is being held.



When you choose Colocation, you own the physical hardware and are, therefore, only limited by the functionality of your own hardware.

You pay for a package of Colo services which typically doesn't change, allowing you the freedom to exploit your hardware to the full without worrying about additional costs.

For example, if your system required additional RAM, the only increased cost would be to purchase and install the RAM; there would be no ongoing cost as the RAM is installed in your own collocated equipment.

On the other hand, with cloud services, if you wanted more RAM in a machine it's highly likely to result in increased monthly costs.



With Colocation, it's your hardware, configured exactly to your specification.

Cloud services are typically pre-configured for the most common use cases, almost a one-size-fits-all approach. This means spending time configuring over the top of cloud service limitations to get the best use for your business.

Whereas when you collocate with your own hardware, you have complete freedom to configure as per your business requirements, saving both time and money on initial setup costs.

How Safe Hosts can help

At Safe Hosts, we pride ourselves on supporting all our Colocation customers equally, no matter their size or requirements, and we understand that no two businesses or organisations are alike.

Please get in touch to find out how Colocation could reduce costs and safeguard business continuity for your organisation.