



**Colocation:
The strategy that will
enable the networks
and data centers of your
organization's future**



Introduction

Banking technology leadership must now create an IT environment capable of supporting the huge demand for data availability, and maintain enough flexibility to allow for future developments.

This requires particular attention to the connectivity infrastructure that underpins new data centers and the evolving global network. And for many data center managers, CIOs and CTOs, that means considering a colocation strategy.

Global finance technology leaders in banks such as HSBC, JP Morgan Chase, Crédit Suisse, Citibank and Goldman Sachs should consider colocation to extend the capabilities of conventional services. However, it requires highly efficient and stable infrastructure to function efficiently. This is particularly true if it's to meet corporate, IT and facilities management requirements while still leaving scope for future advancement.



What are the key drivers?

The rising need for global data availability requires it be accessible through multiple platforms and from multiple server types. And as part of a wider trend towards converged infrastructure and network virtualisation, colocation is the obvious answer – combining the reliability and flexibility of non-cloud and cloud platforms. However, this capability must accommodate all future changes in demand and strategic requirement.

Clive Longbottom, Client Services Director at analyst firm Quocirca, says private data centers used to be easy to plan: “You’d build one on the understanding that the equipment volume in it would grow at a given rate and that the data center would need replacing with a larger one in, say, 10 years.”

Now, things have changed. Equipment volumes relating to the number of IOPS, storage items, and ports are still growing. But actual physical volume is shrinking rapidly.

The impact of public cloud is making planning space requirements impossible. By moving to a [colocation](#) model, the flexibility to manage space as the organization needs it is made easier. Economies of scale around power acquisition, cooling and external connectivity are left to the third party. However, “colocation still gives the organization complete control over the equipment it uses”.

What benefits does colocation offer cloud and non-cloud platforms? To start, better, multi-redundant external connectivity. Some will have dedicated connectivity to public clouds, via Direct Connect and ExpressRoute. Then, there’s access to better tested and resilient business continuity and disaster recovery plans.

Many have a capability to provide a microservices or application market, where organizations gain access to others’ services via a cloud model, but at data center connectivity speeds.

John Curran, VP for Product Management, Managed Systems at Vertivco, adds that the provision and operation of a data center could be considered as the “necessary evil” for delivering services to the business.

“In many organizations the senior management are coming to the realisation that the provision of services does not mean an immediate need to own and operate a data center and so look towards colocation as an alternative,” says Curran.

The benefits of colocation include the off-loading of facilities operation, resilience management, power and cost management, security and access. And all the simple things like owning or acquiring property — or managing green credentials and energy improvements. “All these things take people, time and management attention which does not directly benefit the business,” he says.

“Moving to colocation removes the overhead of all the above, and allows the organization to focus on delivering revenue generating services.”

JOHN CURRAN
VP for Product Management, Managed Systems at Vertivco

What key questions should you ask?

Making sure you've done your due diligence is naturally the first step when considering a colocation strategy. Banks should audit their existing data center infrastructure, skills, experience, and resources to determine whether outsourcing to a colocation provider increases their ability to focus on their own core competences.

Tech leaders need to ask themselves pertinent questions. Can outsourcing reduce capital expenditure on new IT hardware, or improve data center efficiency? And will outsourcing to a colocation provider increase uptime, and improves recovery time objectives (RTO) and recovery point objectives (RPO)?

When banks outsource, they must also consider (as part of SLAs with colocation partners) the need to strengthen data security and regulatory compliance. Ultimately, partners must enable them to become more competitive by allowing faster reactions to future changes in market demand. To improve their own customers' experience, and to innovate by offering new digital products and services.

SUPPORTING DEMAND

Banking technology leadership is increasingly tasked with creating environments capable of supporting a huge demand for data availability while maintaining enough flexibility to allow for future changes.

For example, IDC analysts David Reinsel, John Gantz and John Rydning predicted that by 2025 the global datasphere will grow to 163ZB (that's a trillion gigabytes) – up from 16ZB in 2016. They said that by this time 20% of global data will be critical to our daily lives and nearly 10% will be hypercritical. What's more, almost 90% of this data will require some level of security – but less than half will be secured.



The importance of connectivity

In today's interconnected digital world, one thing makes everything possible: cabling. It is the foundation on which any network depends, and without it there is neither a Local Area Network (LAN), nor a Wide Area Network (WAN).

Choosing the right foundation affects its utility across the entire lifecycle of the network, not to mention your organization's continued competitiveness. Latency must also be tightly controlled, as must exchange and transaction monitoring. This can be achieved by working with the right colocation provider.

Longbottom concurs that particular attention must be paid to connectivity infrastructure to underpin colocated data centers and the evolving global network:

"A microservices or composite application model means services from different environments (physical, virtual, private, public cloud) will need to be brought together to create the composite application," says Longbottom. "If just one of those microservices is served over the equivalent of a piece of wet string, then the whole composite will be too slow and deemed a failure. Connectivity, at both the local and wide area network levels, is key."

"Within the facility, you want the fastest possible connectivity on an east-west basis. Once breaking out of the organization's own environment, then optimum connectivity is still a key area. Being able to use data center connectivity speeds to access other functions available within the same facility can be a game changer. Being able to connect through to other data centers and public clouds at guaranteed speeds over dedicated links is a definite game-changer."

FUTURE ADVANCEMENT

So, how should cabling infrastructure that leaves scope for the future take account of economies of space, scaling requirements, and the ability to handle demand from a huge variety of devices and services?

Space: Structured cabling is essential to ensure that cabling itself does not become a major space issue. It also enables far better overall management and reduces the possibility of human error while engineers unplug and re-plug cables in the wrong place.

Scaling: Cable port density has reached near-optimum levels. However, the opportunity to scale up and out by adding extra modules must be considered – a 96-port box may be okay for now. But adding more 96-port units must not take up too much space or require too much power to the area where the existing box is located.

Devices and services: Intelligence needs to be built-in at both the switch level and at the more abstracted software level, via SDN and NFV. Only through the effective use of a mixed approach can the mass of different endpoints be supported.



The right partner

To effectively leverage colocation, choose a colocation [partner](#) that understands the needs of the business, while meaningfully sharing the risks and the rewards that will come with long-term success. Choosing an organization that acts like a pure supplier could lead to issues down the line, because they won't completely understand your business.

You may face having to re-architect the cabling infrastructure to meet the changing demands of the business – and the increased downtime that comes with doing so. It's important to ensure that your network infrastructure can expand and change over the course of time. Even to the point of adding new network infrastructure technologies to the mix.

It is essential to work with a partner that can ensure data center and cabling infrastructure is sufficiently future-proofed to allow your bank to gain or retain competitive advantage – while minimizing risks like excessive network latency. It's wise to ask potential colocation partners about their own infrastructure, to examine how flexibly they address customer and market change. And ensure that they have the solutions in place to mitigate and normalize latency. After all – if they're doing it for you, they should be doing it for themselves too.



Who are Panduit?

We create physical, electrical, and network infrastructures that make more meaningful connections for modern businesses.

We're highly R&D focused, re-investing 10% of our revenue into development projects. Because of this focus, our customers become an extension of our business, allowing us to create ever better products to satisfy their needs.

- We operate to a single, universal standard in manufacture, testing, and deployment. Every instance of a Panduit product is the same, wherever it's made.
- We operate in over 100 countries with extensive local, regional, and continental knowledge bases to account for on-the-ground realities wherever your business needs us.

- We consult regularly with leaders in industry, software, and hardware to propose and refine solutions for your exact strategic requirements.

As global leaders in network infrastructure innovation and standards development, we represent the natural partner of choice for banking institutions thanks to our unique ability to provide a single, global standard at the highest level possible.

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