Achieving a seamless transition: managing your data centre migration

Business Insights

Historically many businesses have located data centres in their offices, however the majority of office buildings are not designed to be used as data centres: they cannot deliver either the power or cooling required to deploy the latest technologies or the degree of physical resilience and security necessary to meet rigorous business continuity requirements. These limitations, together with the rising costs of building and operating in-house data centres, are fuelling a trend to locate in purpose-designed facilities.

For many organisations, migrating to a large scale data centre operated by a specialist provider can offer levels of protection, resilience and connectivity that would be impossible to achieve in-house due to the sheer magnitude of investment required.

Rigorous planning and execution

Any data centre migration is a complex and potentially disruptive undertaking that involves thorough planning and execution. The planning process requires significant management resources to address the key issues and risks.

The relocation must take into account the essential operating requirements of the organisation. For example, the business might have to meet crucial processing times during the migration. Any move brings with it an increased risk of downtime and it is essential to ensure that plans are in place to deal with this risk. If the company already has duplicate systems, then existing back-up sites can be used during the transition. Otherwise, it may be necessary to hire specialist providers to replicate for a prescribed period, to ensure that the disaster recovery capability is retained during migration.

The physical logistics of the move are also fundamental. Among the issues to consider are the size and weight of machinery; methods for disassembly and assembly of equipment; connection and cabling requirements; moving machinery through the building; how and where to load equipment, and accessibility of the location. In case of unexpected technical / logistical problems, on-call M&E engineers and hardware / software experts should be available to cover all aspects of the migration.

Commissioning the new centre in its final layout is critical. Airflows will need to be re-balanced in relation to the heat generated by the equipment to prevent the development of troublesome hotspots. Use of CFD (Computational Fluid Dynamics) modelling tools may be beneficial and checks should also be made on the quality of electricity through new cables. Finally, the monitoring of the building, equipment and software must be extra vigilant in the period immediately following relocation. For example, fumes from new machines on warm-up may set off Very Early Smoke Detection Apparatus (VESDA); and the move may trigger a variety of software glitches.

Sharing experience

Each data centre migration involves a unique combination of challenges. Global Switch has vast in-house experience of a wide range of relocations and works in partnership with customers' own staff and contractors to facilitate a smooth transition. Drawing on its practical experience, it is uniquely placed to ask the right questions, identify particular hazards, and offer expert advice on the physical elements of the move. Specialist services offered by Global Switch include:

- Assessing current data centre provisions and advising on specifications for new space – including, choosing appropriate rack types, configuration of space, positioning of ventilation grills and balancing of power loads.
- Selecting appropriate project managers and / or contractors where necessary, particularly for smaller companies who may lack in-house resources or experience of the migration process.
- Providing enhanced security arrangements to manage the additional number of staff / contractors on-site during migration.
- Delivering active support by sharing its extensive data centre management experience and contributing to an organisation's own knowledge-base.

Enhancing resilience: improving confidence

Migrating a data centre is a complex process that requires meticulous planning and execution. Properly managed, the benefits of moving mission-critical IT systems to purpose-designed specialist facilities are unquestionable – enhanced security and resilience without the need for large capital expenditure; improved connectivity, scalability and flexibility; and ultimately improved investor and customer confidence. Global Switch's combination of technological expertise and extensive practical experience of the migration process makes it ideally placed to help you ensure a smooth and risk free move.

Migration Checklist

Stage 1: Planning

- ☐ Define the scope & size of the project
- ☐ Plan, agree and allocate resources & budget
- ☐ Agree key determining factors / limitations (network, security etc)
- ☐ Undertake a risk analysis and complete due diligence activities
- ☐ Create project plan identifying the critical path & key resources
- ☐ Complete inventories of existing systems and interdependencies
- ☐ Identify future system requirements (pipeline for growth)
- ☐ Create a step-by-step decommissioning / rebuilding equipment plan, including health and safety procedures
- ☐ Determine interim equipment requirements to keep systems operational during the migration
- ☐ Ensure back-up systems are in place & operational
- ☐ Check that transportation and buildings can cope with equipment size & weight
- ☐ Devise a contingency plan to include illness, accidents and damage to equipment
- ☐ Define connectivity requirements and allocate adequate time for new connections
- ☐ Consider your company's operational requirements and plan the move to cause minimal disruption
- ☐ Undertake a "dry run" to test if the plan is achievable

Stage 2: Migrating

- ☐ Plan new space configuration and reference racks / grid
- ☐ Install and test new data cabling (certification to be issued)
- ☐ Ensure all identified processes and procedures are followed
- ☐ Arrange for M&E engineers, hardware and software experts to be on-call
- ☐ Advise users of changes, and provide contact points for issues

Stage 3: Post Migration

- ☐ Re-balance air-flow systems
- ☐ Check electricity quality
- ☐ Closely observe all building and equipment monitoring systems
- ☐ Test security systems

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If you are considering the migration of your data centre, why not give Global Switch a call on +44 (0)20 7902 7150
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