

FIVE KEY STEPS TO A SUCCESSFUL DATA-CENTER-RELOCATION

During the current economic downturn, more and more companies will relocate their data centers. There are many business reasons for data center relocation (DCR) - consolidation of regional centers into a single site, acquisitions and mergers, and corporate headquarters relocations. Aging infrastructure, insufficient power or cooling, space limitations and lease renewal also trigger relocation decisions. No matter the business decision for relocation the same level of careful planning, expert execution and experience is required for a successful move.

One of the most common misconceptions that we hear when contacted to assist with the physical relocation is “How hard can this be? You just pick them up, move them to the new site and plug them in.” Without a clear understanding of the complexity of all of the steps required for a successful relocation project you run the risk of being off line for hours, days or weeks while problems are being resolved. Fortunately industry best practices do exist and can explain the requirements that must be taken into account before the first server is uninstalled and moved to the new location.

The First Key – *Project Management*

Select a Project Manager. One of the most important decisions to be made at the beginning of the project is selection of the Project Manager. An experienced Project Manager (PM) will ensure that every detail of the pre-planning and execution is carefully detailed, tested and tested again. The PM is the single point of contact managing the timeline, people resources, and budget making sure that every step of the project plan is completed in the defined order and milestones are met.

While you may have an experienced Project Manager on your staff, that person is very likely not going to have experience with Data Center Relocations. This role is crucial to the success of your DCR and if you don't have one on staff, look to the vendor you are partnering with to provide that skill set. Even if you appoint an internal PM (and you should) you will want this experienced professional as part of your team.

Besides leading the overall project, the experienced PM will also provide knowledge transfer to your PM and your Technical Team which will help them with any future changes that may be required after the DCR is complete.

The Second Key - *Planning*

Complete and detailed planning is mandatory for a successful data center relocation. One of the most common issues that impact the success of a DCR is the quality of the documentation. Technical teams will often have the documentation “in their heads” which creates a built in single point of failure. These documents must be written down, approved by the combined technical team and the management team. There are four main documents that must be created. These may be created by your internal team, a vendor/partner or, most likely, a combined team.

- 1.** Document the *Present Method of Operation (PMO)*. In this phase of the project, the Project Manager and Project Team will gather information that will result in the complete and accurate documentation of the Present Method of Operation. The PMO includes documentation surrounding the interactions of all the components of the existing environment including the application interactions, storage requirements, existing backup plans, network connections, user locations, service level agreements, etc. This is a critical step in the relocation process as it provides the project starting point. The better able we are to understand the PMO and all of the inherent relationships of the existing environment; the more successful we will be in executing the move. At the end of this phase a Present Method of Operation (PMO) Document will be completed. The document includes diagrams, inventory lists, service level agreements, descriptions of support processes (i.e. Change Management, Configuration Management, Problem Management, etc) currently in use and any other data that will insure that the PMO is completely understood. This will include logical and physical interactions between components (hardware or software). The goal is to fully document what is being moved.
- 2.** *Desired Future State (DFS)*: In this phase the definition of success is determined. The documentation of the Desired Future State provides an end point for the project and defines the conditions of success. It includes any changes you want to make in conjunction with the relocation (i.e., virtualization, enhanced storage, technology uplift for some or all servers, network upgrades, etc.). It documents the expected end state in sufficient detail to allow for the new environment to be managed using normal service management processes such as Change Management, Incident Management or Configuration Management. A fully documented DFS will allow you to progress toward an ITIL driven process oriented support environment. This document should be detailed enough to allow for the placement of all the moving components from their original location to the destination location.

The Second Key – *Planning* (cont)

3. The next document to be created is the *Design Plan*. During this phase, the project team will develop the “roadmap” for getting from the PMO to the DFS. This will include the various move groups, any new hardware and/or software that might be required, pre-requisite steps required or desired (such as virtualization), known risks and contingency plans for the risks, a high level timeline, communication plan and the impact of client processes on the design. At the end of this task, you will have a good understanding of the process that will be used to accomplish the data center relocation and any incremental budget that might be required to acquire the enabling components.
4. The Design Plan is the basis for the final planning step, *Implementation Planning*. The Implementation Plan will include all the steps, dates, and responsible parties for all the tasks that have to be accomplished in their proper order and with all the appropriate interactions and linkages defined. It will typically include a detailed Project Schedule.

There is other documentation that may or may not be required for your Data center Relocation Project.

For example, a Risk Management Plan is normally created for a project of this magnitude. The Risk Management Plan documents the level of complexity and risk associated with moving or migrating applications and ensuring that there are test plans and communication strategies in place to support their migration. Each risk will be fully documented and a mitigation strategy established. A Communications Plan will help you keep your stakeholders informed of the progress of the move. It may include a number of different levels, such as User Communication, Management Communication, and Technical Team Communication and in some cases, Customer Communication.

Other standard project plan components such as a Quality Plan, Resource Management Plan, and Financial Plan may be created. Often these ancillary documents will be created by an internal PM while the key documentation listed above is managed by the Vendor/Partner PM. While there is no cookie cutter approach to a DCR, most of the documents mentioned above are found in every successful DCR.



The Third Key – *Logistics*

At the end of the day, moving a data center successfully becomes a logistics exercise. Having the right people, with the right skill set at the right place at the right time with the right equipment is one of the keys to a successful DCR. During the planning phase you will have identified everything that is moving, the starting point and the ending point, the changes you plan to make along the way and the timeline for the move. Unless you have an experienced Logistics Specialist on your internal team, the vendor/partner you select to help you execute your move has to provide that skill and the resources to complete the project.

These professionals will determine the size and composition of the de-installation team, the packing team, the transportation team, the unpacking team and the re-installation team and supply those skilled technicians to work side by side with your team. A detailed day of move Script will be created so everyone knows what is to be done every minute of the move event. Depending on the complexity of the move, a Test Move may even be scheduled prior to the actual move event. This knowledge is not normally found in the internal resources of most firms and so selecting the right partner is critical to this step.

The Fourth Key – *Appropriate Resources*

While it is probably self-evident from everything that has been said above, a DCR project has to be resourced properly. Many times, the operations staff is asked to plan and execute these moves. The assumption that they have time to take on this daunting task is normally due to the underestimation of the complexity. In addition, in many cases, your technical team has pursued a career in operations because they don't enjoy project work.

To be successful there needs to be the proper mix of resources who know the environment and those that know how to plan and execute a DCR. Normally a firm will engage a vendor/partner with the expertise and experience to augment in-house resources. The mix may vary from 25% vendor and 75% in-house (where you do the planning and project management and the vendor executes the move) to 90% vendor and 10% in-house (where the vendor provides the project management, planning and execution and you participate in the planning and execution as directed). Normally, the reality is somewhere in between. However, there will never be a successful move without some participation of the in-house resource.

Each move is different and the resources will be customized to the situation but the key is to make sure that you don't ignore this area. The correct resources for planning and execution are an absolute requirement.



The Fifth Key – *Management Support*

This seems pretty simple but it is often overlooked. The management team of your firm has to be supportive of the project. They need to be kept in the loop at all times and engaged to remove hurdles that may be encountered. A DCR is expensive and the management team has to understand the process at all times so they can keep their stakeholders informed.

This also means that the management team has to be supportive of potentially deferring operational changes during the move. A data center that is changing all the time is much harder to move than one that has been stabilized during the planning process. This deferral of operational changes also provides some time for the operational staff to participate in the process.

Keys to a successful data center relocation:

A data center is not a static environment. Over time equipment is upgraded, networks expanded, applications added as your business grows and changes. Understanding the environment, taking the time to plan for improvements and having a clear, documented implementation plan takes time and attention to detail. When the last device is installed and the lights are turned off at the previous location, you want the process to have gone so smoothly that hardly anyone knows you moved. Following these five keys will go a long way in making that a reality.

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