SMART PREPARATION
FOR DATA CENTER MIGRATION

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There are several common reasons why a data center migration could become necessary. As existing infrastructure ages and service contracts expire, companies might find it advantageous to relocate some or all facilities to a new location. Acquisitions and mergers also may necessitate moving one or more data centers to new locations. Likewise, as consolidation becomes more common, it will be less likely or feasible for companies to maintain multiple data centers.

Regardless of the reason for the migration, companies faced with migrating a data center have a few options open to them. Some choose to keep only the best equipment from several locations during a consolidation; others take the opportunity to upgrade some or all of their infrastructure during the move; some retain the status quo and move existing equipment from one place to another.

No matter which path a company chooses, it is certain that the process will take a great deal of time and energy. Poor planning or faulty execution could trigger a domino effect of problematic issues—all of which might result in an unexpected financial burden on a company.

In addition to the potential for hardware damage and data loss, data center migration is often such a complicated and involved process that the slightest unforeseen complication can snowball into much more. A minor error while inventorying server room equipment can lead to delays later, possibly causing unexpected downtime. Depending on the specific

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company, this could seriously impact revenue and, at its worst, may even result in legal issues.

The purpose of this white paper is to help minimize the chances of unforeseen complications for companies by providing a concise breakdown of the most important elements of data center migration.

WHAT STAYS AND WHAT GOES

One of the first decisions that businesses face when moving a data center is what equipment to keep and what to replace. There is no one-size-fits-all answer. For some companies, it makes sense to completely replace everything, while others choose to replace nothing. Most companies opt for a middle ground, seeing the move as an opportunity to update outdated infrastructure.

While some of these decisions might seem trivial or self-contained, they can have serious repercussions. If a business changes its platform in any significant way, there may be compatibility issues with other components. Likewise, a seemingly innocuous hardware upgrade could have a serious impact on end-user functionality. When taking advantage of the disruption to update and upgrade, it is worthwhile to be especially careful about the effects of changes to the system as a whole.

Further complicating the decision of whether to keep equipment is the physical space to which a business is moving. Is the new space built to accommodate the equipment that a business has today, and, if so, will it fit

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new equipment that the business wants tomorrow, too? On the flipside, perhaps the new space accommodates more modern equipment but not older equipment, which raises new conundrums. It's entirely possible that at least some of the decisions about what to keep and what to replace will be determined by the constraints of the new space.

In addition to deciding what hardware to keep and what to replace, data center migrations are also a prime opportunity to take a closer look at hardware and software contracts. Some contracts might have to be terminated simply because the service provider doesn't operate in the new location, while others may be capable of moving with the business. In addition to upgrading hardware assets, this is also a great chance to upgrade service contracts—whether by moving to a new provider or by renegotiating with current vendors.

Once a business has decided what will migrate to the new data center and what will stay behind, the business will need to decide how to make the move and who will do the actual, physical work of moving all the hardware and setting it up on the other end. Businesses may have the resources to make the move themselves, or they may need to contract the job out. If hiring an outside company to make the move, companies should carefully decide whether they can get by with a general moving company or whether they need a specialized IT moving company.

If downtime is a critical issue, a business may opt to move in piecemeal fashion. This can minimize

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downtime as critical systems remain operational while less critical systems are moved. If downtime isn't an issue, though, moving everything at the same time is logistically simpler.

THE IMPORTANCE OF INVENTORY

One of the simplest ways to save time and money during a data center migration is through careful equipment inventory. A complete inventory audit is the first step, so that businesses know what equipment they are supposed to have. Once businesses have verified the inventory, they should label everything, identifying what will go and what will stay. Special note should be taken to record warranty information and serial numbers, and to check that nothing involved in the migration process will void any warranties.

In addition to tracking all the hardware involved in the migration, it's a good idea to pull the system logs and perform a software and services inventory as well. If companies know to what extent each system is being utilized and what backups are scheduled before, during, and after the move, they can better plan to minimize disruption.

Businesses also will need to verify that service providers will provide services at the new location, and efforts should be made to coordinate with providers to effect a smooth transition. If businesses are planning to run concurrent instances of any platforms or software, they will need to check the licensing terms and possibly make special arrangements with the vendor.

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ORGANIZATION IS KEY

Migrating a data center or centers is obviously not a one person job. It takes a team of people, often working very long hours, to move a data center. The process also can significantly affect those not directly involved in the migration process, which is why planning and scheduling are vitally important. The migration's leaders should coordinate with the various business units in the company to ensure that the move doesn't coincide with a particularly busy period and that any disruptions won't unduly effect one unit.

When it comes to organizing the move team, standard management principles apply. Leaders should delineate duties and responsibilities, and divide staff into physical and digital moving teams; at all points, the chain of command should be clear.

When it comes to organizing the equipment, leaders can't be too detail oriented. They should label every box with exactly what's inside—including types and lengths of cable—and should indicate what specific room in the new facility they are going to. This will make setting things back up on the other end much simpler and quicker.

For the equipment and data that aren't making the move, proper disposal is something that can be overlooked until the last minute. Lead movers should look to sell or recycle old hardware wherever possible, or to dispose of it responsibly where recycling is not possible. Batteries in particular require special attention. Regardless of where the hardware is going, care should be taken that

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no data at all is left on any of it. Leaders should plan for and take whatever measures are required by both internal and regulatory guidelines, up to and including physical destruction of storage media.

For the equipment and data that are making the move, it is necessary to keep track of who specifically will have access to what equipment. During the move, normal security measures will be out of effect, making it the ideal time for malicious parties to attempt to breach defenses. The moving team should track and log everything, and be especially vigilant with regards to access control.

FOLLOWING UP

Once everything has been moved to the new location, it's time for another inventory audit. Did everything that was supposed to make the move reach its destination? Once the moving team has verified that everything is present and accounted for, installation can begin.

After everything is up and running, there are still a few things that need to be done. Thorough testing of all systems and software is critical. Regarding the migration itself, a project audit will help ensure that the next move will go even more smoothly that this one did. Team leaders and members should catalog any problems and make a note to follow up with C-level management to make sure things are working properly from their point of view.

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CONCLUSION

Migrating a data center is a complex, time consuming, and difficult project. It can be easy to overlook even some of the more important details in the hustle and bustle.

It is very important to stay organized throughout the process, and the key to doing so is in documentation. Businesses should keep accurate inventory and check it at both ends; they should track and log all personnel and equipment during the move, and they should have a detailed plan for each step of the actual moving process. If these criteria are met, the migration should go smoothly.

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