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Better Track Changes In Your Data Center

Monitor Changes In Networks, Servers & Software

August 13, 2010 . By John Brandon

Managing change in a data center requires a great deal of perseverance. After all, changes will come fast and furious, and every IT expert knows that managing this change can mean the difference between a smooth flowing operation and one that is reactionary, prone to failures, and always in a state of confusion.

SMEs should consider how change can affect operations, not just from a governance aspect (such as the regulatory concerns for some markets) but also in terms of how changes affect the daily operations, says Rob Gardos, the CEO of GridApp (www.gridapp.com). This puts IT in a planning and management mode instead of a reactionary mode, always surprised by data center changes. In a smaller company, not tracking changes can create just as much confusion as a larger company.

"First and foremost, managers need to understand why they care about tracking change in the data center," says Gardos. "For SMEs, this is often about minimizing downtime by effectively managing change events, reducing the amount of time it takes to enact change—net result is saving money, getting a better understanding of your assets to enable better utilization of resources, and compliance with outside regulatory requirements."

Gardos says IT managers need to ask several key questions about data center changes, including which tools should be used to manage the change and why, outsourcing arrangements, what typically needs to change in the data center and why, and what tools are available to help.

"Unless they have a detailed inventory of their environment, an SME will need some type of discovery software that provides a high-level view of all the hardware/software assets within an environment," says Gardos. "If they are hoping to improve the tracking of changes, then they'll need one of the many change management systems for ticketing and data center change control. If they're hoping to drive efficiency at the server deployment level, then one of the automation solutions, especially one that is capable of managing virtual machines, will be required."

Charles King, president and principal analyst at Pund-IT, agrees that data center managers need to do a comprehensive audit of the services and hardware inside a data center before they can attempt to track the changes for that equipment. He says this audit should include establishing the age of equipment, all storage and networking hardware, and all software tools.

Planning For Change

King says that once you know which systems will change, the next step is to think about working with an outside vendor to help you manage the change and help you stay focused on providing actual services. This can be just for an initial assessment—how the data center should manage the change—or it can mean working with a company to effectively manage the changes, especially related to server usage.

"Some SMEs certainly have the requisite experience to conduct an assessment, but most are constrained by lack of expertise and/or budget to perform an effective assessment," says King. "In those cases, they are best served by engaging a trusted vendor or data center management specialist both to carry out the assessment and to provide guidance for long-term strategies."

Joyce Tang, a principal consultant with AgilisIT, says another early step in managing change in a data center is to make sure end users are involved. The reason for this, she says, is that the users are the ones often impacted by the changes and might not be able to carry out their duties if a change affects them and requires their involvement.

"Getting buy-in from the actual users is absolutely critical, and this is often undervalued," says Tang. "We tend to focus on building the system and forget the human factor. While there are aspects that can be automated by the system, no amount of automation can replace human participation."

Pitfalls To Avoid

Change tracking provides many key benefits, such as IT knowing which changes have occurred at all times and being able to respond to failures and issues more fluently. But change tracking does create some new issues for smaller companies, including the time investment to make sure changes are tracked correctly and consistently. King says some smaller companies set high expectations initially on change control and then fail to stay with the plan.

"Lack of understanding and unrealistic expectations about asset performance can damage both long- and short-term efforts," says King. "This is particularly the case in companies that are trying to develop strategies around virtualization, where passive or willful ignorance can sabotage the best intentions. Another issue is the fact that the change tracking process never really ends, especially in companies that are actively using virtualization solutions and tools."

Tang reiterates the need for end-user buy-in when tracking data center changes. She says without this support for tracking, say, application servers and the features offered for departmental use, end users can quickly lose faith in IT's ability to manage changes, and the change tracking will become an initiative that loses steam. Another example could be the storage requirements and how those are tracked for departments, especially given the fact that storage needs tend to change the most as new projects emerge quickly and as the company grows.