



Data Centers Explore AI, Data Science & DevOps to Meet Changing Workload Demands

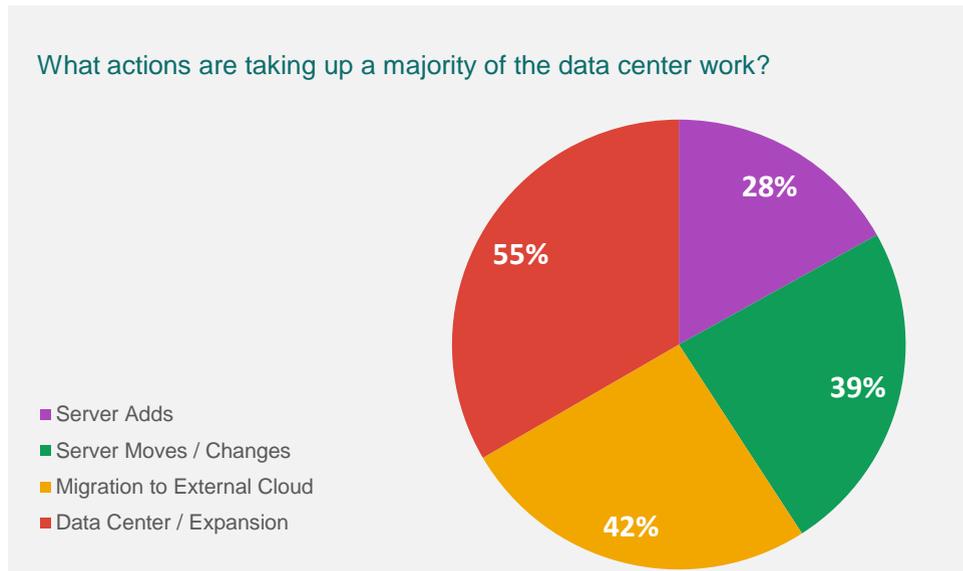
Winter 2018

Introduction

Our increasingly connected world is generating more data than ever before, creating demand for data centers to reach new operating heights. This has caused a looming and severe power dilemma, leaving data center managers faced with a growing number of decisions involving cloud migration, edge computing and other evolving expectations in order to stay competitive in today's industry landscape. As a result, IT teams are forced to rethink their current infrastructure ecosystem and look to the latest in technology in order to balance power capacity and demands.

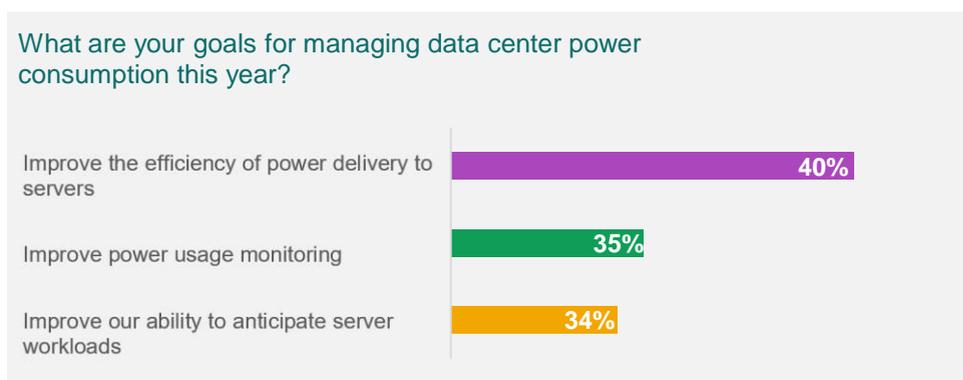
Seeking to expand current operations, IT managers and data center operators require a deeper understanding of how their infrastructure currently performs and what efficiency gaps can be filled to meet rising demands. With granular insights into power consumption, IT teams will be able to better understand their ecosystems before adopting next generation practices driven by artificial intelligence (AI), data science and DevOps to optimize their infrastructure expansion.

A recent study carried out by Morar Consulting amongst 311 IT directors and managers, IT system administrators, and applications architects in the US and UK reveals 55% of organizations report data center expansion takes up the majority of their work, capturing the industry's urgent response to rapidly growing power demands. This report summarizes the findings from a study carried out in Winter 2018, showcasing the need for granular insights into power consumption and IT teams' openness to new technologies related to AI, data science and DevOps to meet expansion goals.



Power Consumption is Top of Mind for IT Managers

It is evident power consumption monitoring is an essential tool for today’s IT managers, with 87% of respondents indicating their organizations have experienced power issues. In order to directly combat these issues, 79% of respondents indicated they developed specific power consumption goals for this year. This does not come as a surprise as power issues impact all aspects of data center operations, leaving teams eager for opportunities to improve the efficiency of power delivery to servers (40%), power usage monitoring (35%) and the ability to anticipate server workloads (34%).

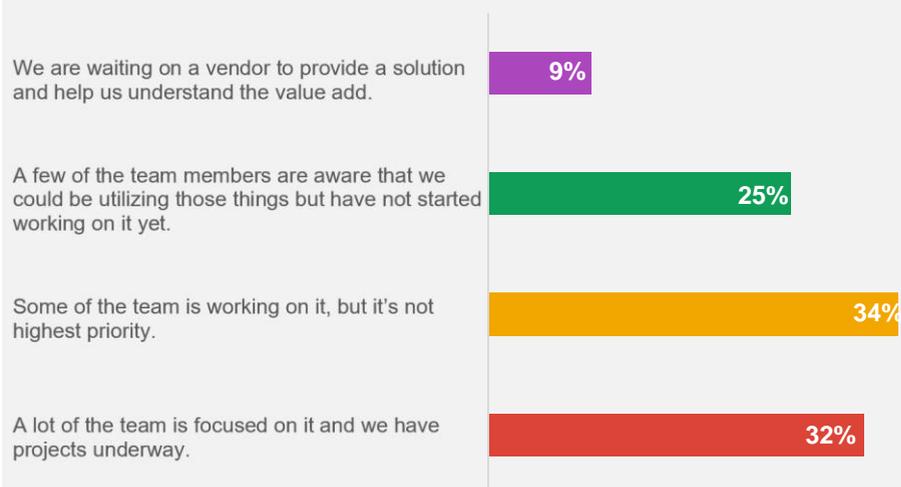


In fact, many teams have already integrated data center management tools into their infrastructure in order to curb power issues. Looking to capture a detailed overview of their data center operations, organizations that have implemented data center infrastructure management tools indicated they find value in power monitoring (44%), real-time monitoring (41%), data center capacity planning (36%) and life-cycle management (35%). Even with these insights, over half (59%) of respondents are still eager to receive reports that provide an analysis of server power characteristics per model for future expansion.

Looking into Next Generation Technologies for Expansion

With the emergence of AI, DevOps and data science technologies, IT teams are increasingly finding value in these innovations for infrastructure management. According to the survey findings, many data center managers have already found ways to implement these technologies into current operations. Over two-thirds (66%) of teams have AI-related projects in motion while 78% are starting to use AI-driven features offered by their data center management tools. Additionally, a majority of respondents (88%) have implemented or are interested in developing data science analytic tools in order to formulate solutions. This sentiment is reflected as teams introduce DevOps initiatives, with 69% of respondents indicating DevOps has changed the tool chain and metrics the company uses to measure value. These innovative technologies are leading the way towards increased efficiency as IT teams strive to meet new power demands and expand their infrastructure.

How much of your team is looking at artificial intelligence techniques to identify efficiencies or opportunities?



Conclusions

IT management leaders and decision makers are striving to meet rising power demands by looking for ways to enhance their understanding of current power consumption. While there are several options teams can evaluate to forecast for the future, data center managers are eager for more information as they look to plan for infrastructure expansion. As long as data centers are being pushed to capacity limits, it's likely organizations across industries will continue to be interested in new technologies – like AI, DevOps, and data science – to meet these demands.

About the Survey

A survey of 311 IT decision makers involved with IT infrastructure management including IT managers and directors, systems administrators, and application architects in the US and UK. The survey was conducted online by Morar Consulting and commissioned by Intel DCM and Dell EMC during November 2018. Results of any sample are subject to sampling variation. The magnitude of the variation is measurable and is affected by the number of interviews and the level of the percentages expressing the results. In this particular study, the chances are 95 in 100 that a survey result does not vary, plus or minus, by more than 5.6 percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample.