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Crisis: Data centres running out of space and are on power overload says survey

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43% of data centres are running out of physical space and power density in racks is at an all time high, a survey by the Aperture Research Institute has discovered. As e-Government services increase in volume and usage, this may become an issue.

The Aperture Research Institute is the first organisation dedicated to researching data centres, their challenges, and best practice management.

The survey of over 100 enterprise **data managers**, representing over 600 data centres, covered a spectrum of company sizes and industries, including banking, insurance, healthcare, **data services**, retail, and telecommunications.

Nearly 90% of those surveyed indicated that 75% or more of the space in their data centres was already allocated to IT equipment. More than 43% of respondents reported that 90% or more of their data centres were in use, which may suggest that future needs are being planned with the rapid growth in processing and storage across all **industries**.

Compounding these concerns is the fact that servers and racks are using more power than ever before. Nearly 38% of respondents said that their average rack was using from 7 to 18 kilowatts or more. As well as putting pressure on the **power supply** infrastructure, such a power high density will also increase demand for cooling and increase the risk of downtime.

One of the reasons power density has risen is the use of blade servers.

Blade servers offer a smaller physical footprint, allowing more servers to be placed in a rack, but they require more power and cooling. Of the respondents, 90% reported that their companies had blade servers in their data centres, but nearly 74% said that less than a fifth of their new servers would be blade servers.

The increased complexity of these blade servers and the intense demands of power and cooling also increase the risk of human error, which was cited by over 57% of respondents as a leading cause of outages. As many as 18% of respondents said they didn't know what the average power density of their racks was, suggesting they didn't have the tools or process to manage capacity and are at an even greater risk of outage due to error.

"Data centres are facing a time of crisis because of the increased demands on their physical resources and management," said Steve Yellen, vice president of marketing at Aperture. "There's a gap between IT and data centre facilities that's resulting in a rapid increase in high density equipment without thinking about the ability of a data centre to reliably support that capacity. With these data centres stretching thinner and thinner, more and more instances of downtime and failure are likely to occur."

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