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Ganesh Bhat

The data centre of tomorrow

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> **Ganesh Bhat, head of data centres, eHosting DataFort**

The data centre of today is very different from what it used to be, and the design strategies continue to evolve in the face of new computing trends such as big data, cloud computing and mobility. In fact, data centre infrastructure is no longer only brick-and-mortar walls, and data that was once considered sensitive and not allowed to leave the organisation boundaries is today being hosted with external service providers.

Increased data volume, faster data accessibility requirements and data longevity are the key drivers for the changing data centre blue prints.

Cloud computing is one of the main technologies driving the transformation of data centers. It offers solutions that facilitate faster business operations. With cloud-based services, users get the flexibility to scale their infrastructure capacity on demand. Moving forward, we will witness dramatic changes in the structure, software and control processes of data centres.

Also, a few years ago, applications would sit on individual servers and were supported by their own storage. This started the era of virtualisation as we know it today. This approach required a much more elegant and robust network infrastructure to provide performance, management and flexibility to deal with the increase in traffic and this has greatly impacted the modern data centre.

The modern data centre has considerably improved in efficiency and cooling. This has greatly affected energy management, taking it a step closer to becoming a sustainable green data centre. Companies that have adopted cooling best practices have noticed better reliability of IT equipment; increased cooling unit efficiency; increased cooling unit capacity; and reduced operating expenses.

You would also notice that today's data centres have raised flooring, which ensures robust performance. Also, some data centres have flexible power feeds under the raised flooring which leads to uniform and unhindered air flow, directly impacting the temperature.

Data centre infrastructure management (DCIM) is also rapidly catching up. Asset management, change and configuration management, billing, and PUE monitoring have now become available on dashboards for the operation team and management.

Modern data centres also have to deal with greater volumes of data and should be able to service more users. This arouses a need for better flexibility and greater scalability. At the same time, tougher security, 24-7 network accessibility and resilience has become more critical than ever.

Today, data centers demand 24-7 onsite physical security, including security guards, motion detectors and security cameras. In addition, entry control through access cards and biometric access systems has become mandatory.

In essence, data centres are rapidly evolving to better meet current and future business requirements. Having said that, it is imperative for IT professionals to keep up with the pace of change and ensure that their data centres are upgraded constantly year on year.