

HYPERCONVERGED INFRASTRUCTURE: A KEY BUILDING BLOCK FOR EVOLVING IT ENVIRONMENTS



As more enterprise data is produced at the edge of government networks, it will become more important to process that information near its source for reasons of security, cost and efficiency. In this Q&A, **Satyam Vaghani**, general manager for AI and IoT at Nutanix, explains how hyperconverged infrastructure simplifies the move to IoT, edge and cloud computing environments.

How will IT infrastructure demands change as state and local agencies move toward smart environments that leverage IoT, cloud and edge computing?

First, with IoT and edge computing, every edge location becomes a data center. Agencies that once operated a handful of mission-critical data centers will now have to manage many. Second, today's applications — email, file sharing, etc. — are meant to serve humans, but most of the use cases for IoT and edge computing are for machines that must process a ton of raw data. The application stack to power this new generation will be very different. Third, applications increasingly will be distributed across multiple clouds. For example, video from police body cameras is collected at the edge of the network where folks are working, but the archiving and processing are done at the police station or in the cloud. Agencies will need to create a universal data plane that makes data movement very easy and secure between all these clouds.

What compute/storage/network capabilities will state and local agencies need as they move toward making data-driven decisions in real-time or near real-time?

Computing will need to become increasingly miniaturized. Take drones and autonomous vehicles for example. To capture and process data on these devices — and make them autonomous — you have to miniaturize the computing stack that does the AI on top of the data.

What key challenges do states and localities face as they move in this direction?

The challenges involve people, process and product. Instead of experts in databases, storage systems and networking, organizations will need experts in things

like containers, AI and real-time analytics. In terms of process, the pace will be much faster; they'll need to deploy new applications every month and update apps every week or even daily. Finally, ensuring security in the context of this amount of change will be very complex.

How does hyperconverged infrastructure support the move toward IoT and edge computing?

Hyperconverged infrastructure provides the ideal building block for setting up infrastructure that is extremely simple to operate, secure and scale. By bringing together compute, storage and networking functions onto a core building block — a server — it eliminates the inefficiencies associated with getting disparate moving parts to work together securely and efficiently. It flips the "80/20" rule. Instead of spending 80 percent of your time on infrastructure problems, you can now spend 80 percent of your time on what matters, which is business logic.

How does hyperconverged infrastructure enable states and localities to get more value from hybrid cloud environments?

To achieve the hybrid cloud vision, certain tasks — for example, provisioning or securing infrastructure — must be done the same way in each cloud. Hyperconverged infrastructure organizes these details so they look the same across multiple clouds. In addition, it lets you easily control all three parts of the infrastructure stack — compute, networking and storage. This control and consistency across the hybrid cloud environment improves your ability to complete tasks more efficiently and effectively.

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vTaxation without innovation...it's a thing, and we hear about it all the time. Companies that customers have grown accustomed to, but aren't innovating. Or giving you the tools you need to innovate. Instead, they're simply recycling, bundling, or rebranding existing tools without delivering new, cutting-edge solutions.

Since we pioneered hyperconverged infrastructure in 2011, we have been relentlessly focused on innovation to change the way organizations consume and leverage technology, melding web-scale engineering with consumer-grade design for a delightful customer experience. In just a few years, our solution expanded beyond storage and compute to include virtualization, security, networking, and multi-cloud automation, making the dreaded infrastructure management experience simple, efficient, and cost-effective.

The proof? We've been consistently recognized as **Leaders in HCI** by the top industry analysts.

- [Read](#) the New Gartner Magic Quadrant for Hyperconverged Infrastructure: www.nutanix.com/gartner
- [Read](#) the Forrester Wave™: Hyperconverged Infrastructure, Q3 2018 : www.nutanix.com/forrester

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