GUEST COLUMN SYSTEMS DEVELOPMENT

IT Modernization through Hyperconverged Infrastructure

Moving to HCI can help agencies meet IT mandates and streamline processes.

While many federal agencies understand the value of hyperconverged infrastructure (HCI) for VDI and workload consolidation, fewer understand how it can also help agencies achieve IT modernization goals. The same benefits agencies realize from HCI in areas like virtual desktops, shared storage, and workload consolidation can help them gain traction in meeting other IT modernization goals, such as scalability, availability, performance, security, cost-effectiveness, and time savings.

HCI is the most advanced infrastructure currently available. While converged infrastructure precertifies and assembles a set of traditional storage, compute, and networking racks; HCI takes that a step further with software-defined, node-based, modular infrastructure building blocks that include compute, memory, storage, and networking. A recent report predicts the HCI market will reach nearly $14 billion by 2024, and notes government are actually expected to be among the aggressive adopters.

One of HCI's biggest benefits is time savings. Time is money, and time spent spinning up infrastructure components, ensuring all pieces work together, and are all fully secure is time not spent delivering on the mission. Working with a hyperconverged infrastructure, each node consists of fully integrated and tested infrastructure. It's fast, scalable, and secure; helping agency personnel perform mission-critical tasks instead of spending time creating infrastructure.

PROGRESS ON IT MODERNIZATION

Agencies are under pressure to make progress with IT modernization. They are charged with increasing use of cloud computing and shared services, optimizing data centers, improving service delivery and performance, and shoring up cybersecurity. HCI delivers in all those areas.

Meeting the Data Center Optimization Initiative (DCOI)—a requirement that includes consolidating inefficient infrastructures, optimizing facilities, improving security, saving money, and improving efficiency—is a tall order. HCI puts these requirements well within reach. By replacing older, rack-based, sprawling infrastructure with self-contained HCI nodes agencies can drastically reduce their data center footprint. HCI also abstracts the underlying hardware with a layer of software. This abstraction layer provides unparalleled visibility and security through complete integration and API access.

Agencies are also tasked with reworking IT infrastructure in ways to help more efficiently develop and provision new services and architectures. The HCI architecture makes it easy to scale-out to accommodate new technologies and service delivery models simply by adding nodes.

Transitioning more workloads to the cloud is also an ongoing goal for all federal agencies, and the pressure continues under the new administration. By building out an internal private cloud on HCI, agencies can become more comfortable with the cloud model. They are both easy to scale, let users consume resources on demand, and pool resources. When they're ready, it's fast and easy to move those workloads to an external cloud using a cloud orchestration engine.

One example of the latest in hyperconverged infrastructure comes from the trusted company NetApp, and is named simply NetApp HCI. NetApp HCI is interesting in that it can scale compute and storage resources independently with guaranteed quality or service. These features avoid costly and inefficient over-provisioning, enable workload consolidation, and simplify architecture planning.

Adopting HCI is a great way to meet today's IT modernization initiatives. It's also a cost-effective way to future-proof the data center, ensuring agencies will be able to accommodate whatever future technologies emerge, and meet whatever IT-related initiatives the federal government imposes. And when data stores grow or applications change, HCI can always keep pace. If there was ever a time to get on the HCI bandwagon, the time is now.

NetApp

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