

CAS Severn\*

# Turbo-charge Your Cloud Journey with Hyper-Converged Infrastructure and Multi-Hybrid Cloud

*Capture Big Gains in  
Performance, Scalability and  
Efficiency without Disruption*





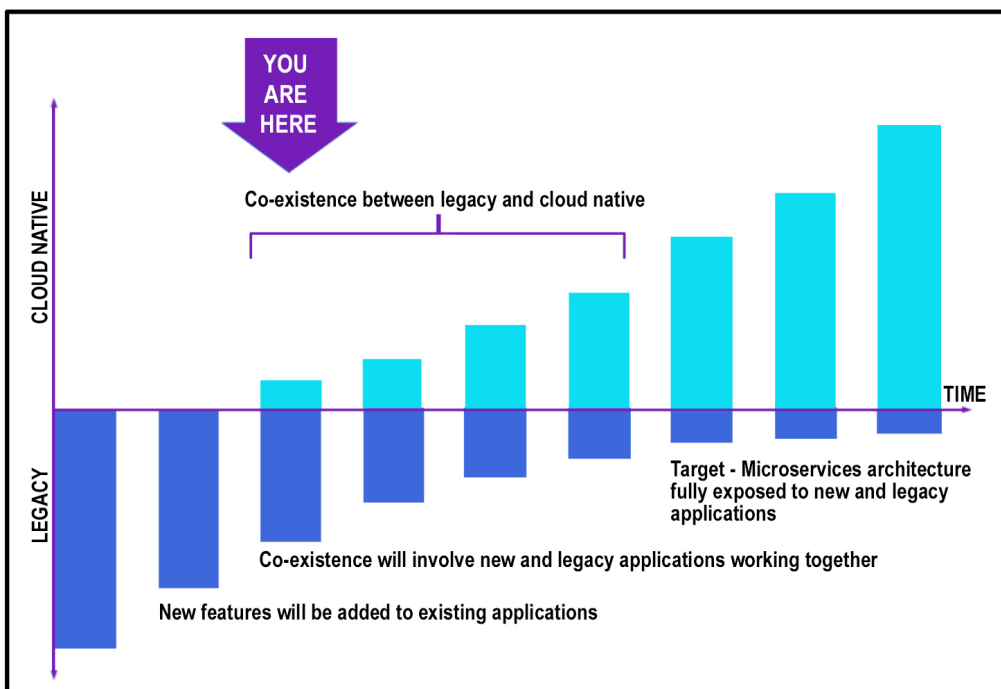
We're in one of the most tumultuous periods in the history of IT. Adoption of cloud is accelerating while cloud service delivery models and solutions change rapidly. In this fast-evolving landscape, multi-hybrid cloud environments, which combine on-premise private clouds and multiple public cloud providers, offer enterprises a gradual, efficient and non-disruptive journey to cloud. They also allow enterprises to capture cloud-driven benefits, such as increased performance, scalability, business agility, data protection, security and reduced operational costs.

At CAS Severn, a leading technology infrastructure provider founded in 1978, many of our clients are considering deploying or already have implemented multi-hybrid cloud environments. In fact, CAS Severn has already completed or engaged in 25 multi-hybrid cloud projects. Multi-hybrid is gaining traction because enterprises fully appreciate the compelling advantages of cloud and yet realize that it's impossible to migrate to cloud inexpensively or overnight.

Nonetheless, an IBM-commissioned McKinsey [study](#) reports that most enterprises have completed only 20 percent of their cloud journey and the remaining 80 percent of their workloads still exist in on-premise.

That is all about to change due to two major events in the last year that are driving substantially increased demand for hyper-converged infrastructure (HCI), which is often the preferred foundation for multi-hybrid cloud environments.

### ***Cloud Native and Legacy Apps Will Likely Co-exist for the Next 10+ Years***



Source: IBM



For one, VMware, the leading hypervisor solution, has matured to offer enterprise-grade security, performance and scalability, opening a broader spectrum of use cases for HCI and cloud. Two, Nutanix, the leading HCI software vendor, dramatically reduced pricing, making HCI affordable to more enterprises.

As evidence of fast adoption of HCI, a [Markets and Markets](#) study reports that the global market for HCI is expected to grow from \$4.1 billion in 2018 to \$17.1 billion by 2023.

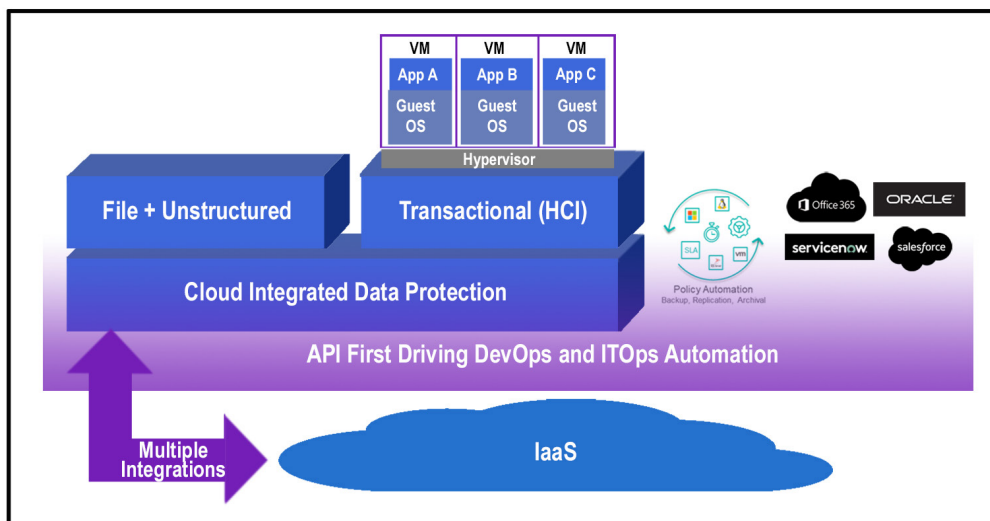
In this ebook, we describe top strategic considerations and lessons learned for enterprises committed to accelerating and maximizing the benefits of their journey to cloud.

## SMART FIRST STEPS TOWARD MULTI-HYBRID CLOUD

There is no single pathway toward cloud. Enterprises need to assess and determine which of the IT operating models and associated applications, infrastructures and platforms they will move to cloud over time. Examples of solutions aligned with these layers include:

- **Application Software as a Service (SaaS):** Salesforce, Office 365, Oracle Cloud, ServiceNow
- **Network access, control and security with software-defined networking (SDN):** VMware NSX, Aruba, Cisco
- **Infrastructure as a Service (IaaS) and Platform as a Service (PaaS):** Microsoft Azure, Amazon Web Services (AWS), Google Cloud
- **On-premise infrastructure:** Dell, VMware, Nutanix, IBM, HP, Lenovo
- **Development and ITSM:** Docker, Kubernetes

### Corresponding Cloud-Enabled Infrastructure Architecture





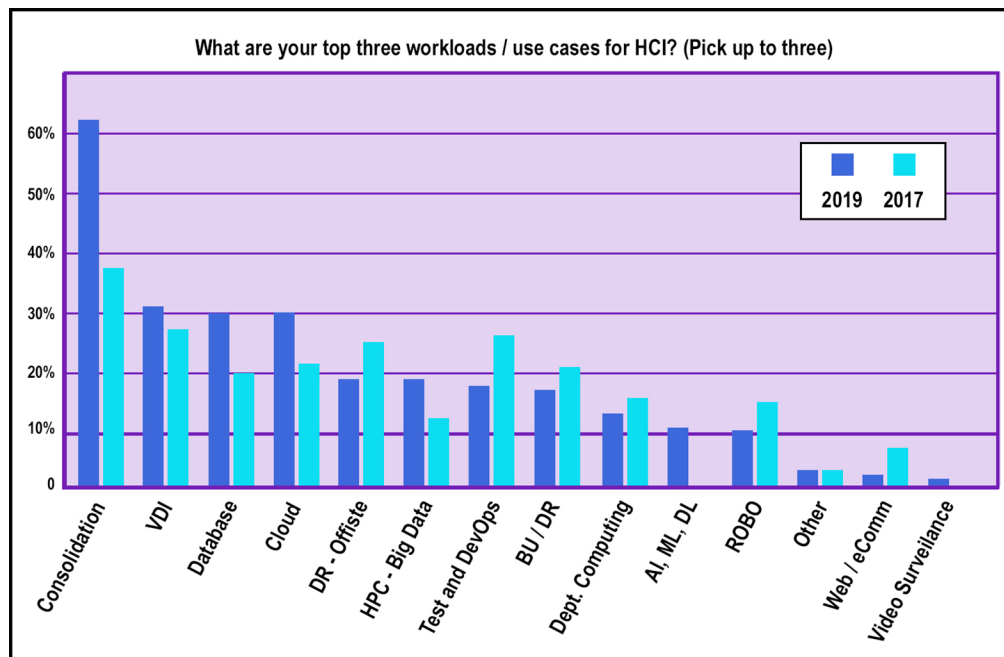
We don't recommend re-architecting your operating models for multi-hybrid cloud all at once. Instead, we advise focusing on one workload or a set of workloads at a time. We have identified the easiest, highest value and lowest risk workloads to focus on initially: transactional (e.g. applications, databases, etc.), file and unstructured data, and data protection. With multi-hybrid, you can choose on-premise cloud, public clouds, or a combination.

## HYPER-CONVERGED AND CLOUD GO HAND IN HAND

HCI solutions have emerged as one of the most popular choices for virtual machines and database environments. Enterprises increasingly use HCI to gradually roll out private cloud across their enterprise. A private cloud running on an HCI provides excellent scalability to add workloads and built-in hooks to public cloud providers.

From a [survey](#) of 291 IT professionals at companies with more than 1,000 employees, The Evaluator Group determined the top workloads for HCI are consolidation, VDI, database and cloud.

### Top Workloads / Use Cases



Source: Evaluator Group Study / May 2019

With fully integrated and virtualized servers, storage and networking components, HCI solutions provide streamlined deployment and maintenance, simplified vendor support and excellent scalability. They avoid the integration, deployment and administrative hassles of traditional three-tier infrastructures based on separate servers, storage and networking.

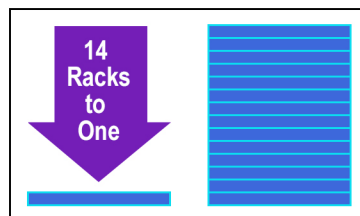




## WHAT TO EXPECT FROM HCI AND CLOUD? A LOT

With so many of our clients deploying HCI for multi-hybrid cloud, we've seen strong results across a broad spectrum of projects ranging from 50 to 1,500 virtual machines (VMs). Consider the outcomes of one of our clients in higher education achieved with HCI and multi-hybrid cloud:

- Consolidation of 14 racks to one rack
- 56% ROI and \$444,000 savings in five years
- Massive co-location cost savings Sized for 194 VMs with scalability to 300 VMs
- Simplified LEED green building certification
- All-flash storage performance drives better student experience during peak registration
- 90% reduction in power and cooling consumption
- Operational efficiencies include consolidating seven “panes of glass” to only two
- Designed for private cloud with readiness to access public cloud
- Project completion in 11 weeks, including engineering and migration



Repeatedly, we've worked with our clients, both large and small, on HCI cloud projects that achieve substantial cost savings, better system performance and improved staff productivity. Our IT clients provide their enterprises with faster, more reliable services, non-disruptive upgrades and quicker response to requested changes.

Also, vitally important is the relief that HCI and cloud provide to overworked IT teams that are often mired in storage, server and networking hardware support and integration issues. HCI provides IT with much-needed time to develop high-value expertise in cloud, virtualization, databases and applications.

## LET'S GET STARTED WITH MULTI-HYBRID CLOUD

Whether our clients have already started on their cloud journey or they are ready to begin now, we work with them to first assess and prioritize workloads that will benefit the most by moving to cloud. We also identify the optimal layer, such as SaaS, IaaS, PaaS or on-premise, for these cloud-based workloads. After this cloud readiness assessment, we can assist with deploying solutions, such as transactional, data protection and file and unstructured data.

CAS Severn provides our clients with the following advantages:

- Strong business case with ROI and time to project value
- Education on latest trends and technologies in fast-changing markets
- Design and deployment skills across all major HCI vendors, including VMware, Nutanix, Red Hat/IBM, Cisco, Dell and HPE

- 40-plus years of experience and expertise in virtualization, cloud, disaster recovery and data protection
- Turnkey, fast and efficient delivery of projects
- Post-project analysis and validation of outcomes

## AVOID CLOUD SILOS AND HIGH-COST LOCK-IN WITH PUBLIC CLOUD

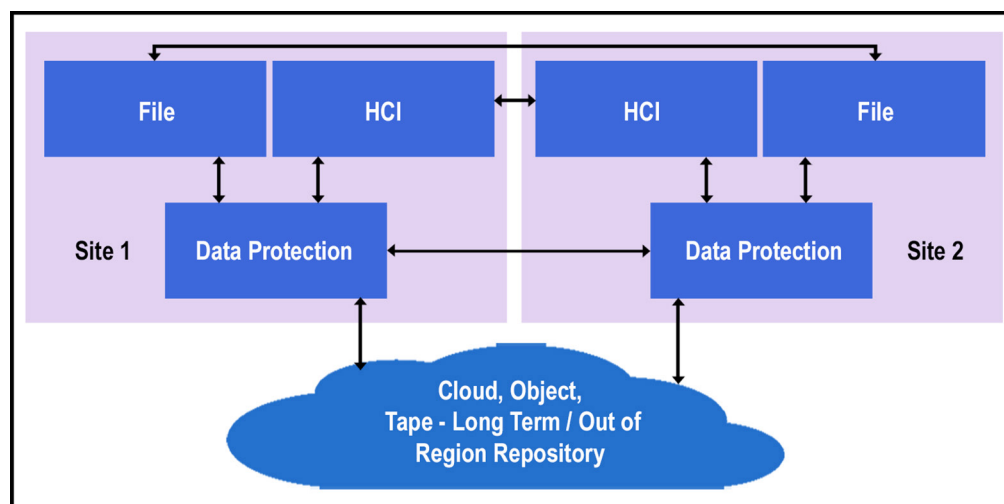
Enterprises often find that migrating data to public clouds is simple, especially compared with building on-premise clouds. Yet, later down the road, enterprises are surprised to learn that public cloud providers often charge hefty fees for downloading and migrating data from their clouds. Further, because public cloud provider tools are often proprietary, IT staff may need significant retraining to switch public cloud providers or migrate public cloud workloads to an on-premise cloud.

To avoid these costly and restrictive scenarios, we recommend and deploy standard management frameworks, such as VMware vSphere, Red Hat OpenShift and other solutions, to make it easier and cost effective to move data in and out of public clouds. In addition, these technologies greatly streamline migration to a new cloud provider or on-premise cloud.

## PROTECT AND SECURE YOUR DATA IN THE CLOUD

According to Gartner research, 50 percent of organizations will augment or replace their current backup application with another solution between 2017 and 2021. A key driver is that legacy data protection systems are often too complex and lack integration with the cloud. As availability and maturity of cloud-based data protection solutions have increased, many of our clients are replacing legacy systems with HCI for data protection in the cloud.

### Infrastructure Resiliency





Cloud-based data protection solutions running on HCI dramatically reduce labor-intensive backup administration while shrinking backup and recovery windows and backup storage.

HCI's ease of use and quick deployment also have proved valuable for enterprises seeking disaster recovery for on-premise cloud. We recommend primary and recovery sites, and ideally a third site that is located at a significant distance from the other two sites. We also recommend and design solutions that protect enterprises from hardware and software failures, facilities issues and site-wide outages in line with their RTO and RPO objectives.

### **PRIORITIZE AGILITY AND FLEXIBILITY AT EVERY STEP OF YOUR CLOUD JOURNEY**

Because the market is evolving so rapidly, it's important to be ready to make changes and update as your cloud journey progresses. You also can increase the value of your cloud initiatives by wrapping current projects, such as refreshes and upgrades, into your overall cloud strategy.

Another priority is making sure your cloud environment is integrated with your data protection and overall infrastructure. The number one problem we encounter is a siloed cloud environment. This creates issues for project management, change management and day-to-day administration, and ultimately will require a significant revamp of the cloud infrastructure.

Another way to manage change well is to choose an integrator that has extensive experience in cloud planning, deployment and migration at the infrastructure layer. If you're changing the application for cloud, such as moving a CRM from an on-premise to off-premise cloud, it's also important to engage the application provider.

Lastly, an experienced integrator with a strong track record in cloud should advise you of all the hard and soft costs, including hardware, software, re-training and migration. Partners also should provide your enterprise with the business case and time to value, fast and turnkey project delivery and post-project analysis. With the right partner and HCI, your enterprise will be in a strong position to accelerate your journey to multi-hybrid cloud and capture the high-value benefits and savings.

### **READY TO START YOUR CLOUD JOURNEY?**

Contact us to start the conversation.

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Cage Code: 3QUNO

## CONTRACT VEHICLES

### Education: State and Local:

Maryland Education Enterprise Consortium (MEEC) –  
Security Solutions Services, IT Security Assessment  
& Advisory Services

County of Prince William – Communications &  
Infrastructure

Fauquier County Government and School Board

Prince George's County Public Schools  
Data Center Maintenance and IT Support Services

Charles County Public Schools Local Area  
Network (LAN) Infrastructure Equipment

State of Maryland CATS

State of Maryland COTS Software

State of Maryland Hardware & Services

State of Ohio

Virginia Information Technologies Agency (VITA)

County of Fairfax, Virginia IT Hardware, Software,  
and Related Services

Virginia's Small, Women-owned, and Minority-owned  
Business (SWaM)

### Federal Contract Vehicles

Chief Information Officer - IT Commodities/Solutions, CIO-CS



GSA Schedule 70

NASA SEWP V

DHS FirstSource II SDVOSB

## FOCUS INDUSTRIES

Federal Government  
State and Local Government  
Higher Education  
Healthcare  
Commercial Business