




Why You Should  
Move Away from  
SAN and  
**Adopt HCI**



**Enterprise IT teams today are looking for ways to deliver IT services with the speed and operational efficiency of public cloud services such as AWS, Azure, and Google Cloud Platform (GCP).**

In the past, traditional IT infrastructure—with separate storage, storage networks, and servers—did the job of helping IT accomplish mission-critical objectives. However, it is not well suited to meet the growing demands of enterprise applications or the fast pace of modern businesses. The silos created by traditional infrastructure add complexity to every step, from deployment to management, which makes it harder to respond quickly to constantly-shifting priorities of your business. We're left with an urgent need for innovation and a paradigm shift within enterprise infrastructure that enables IT professionals to work smarter, not harder.

Hyperconverged infrastructure (HCI) has been around for more than a decade, simplifying datacenter operations, and enabling faster scaling with lower cost than traditional infrastructure. In its short life, HCI has undergone a significant transformation and is now able to support the vast majority of modern applications and use cases on a common platform.

Today, HCI enables organizations to operate their Software-Defined Datacenters (SDDC) as private clouds, and it also seamlessly integrates private and public clouds into a unified hybrid cloud. There are eight key reasons why organizations are replacing their aging SAN infrastructure with modern HCI, and why you should too. **Let's take a look.**

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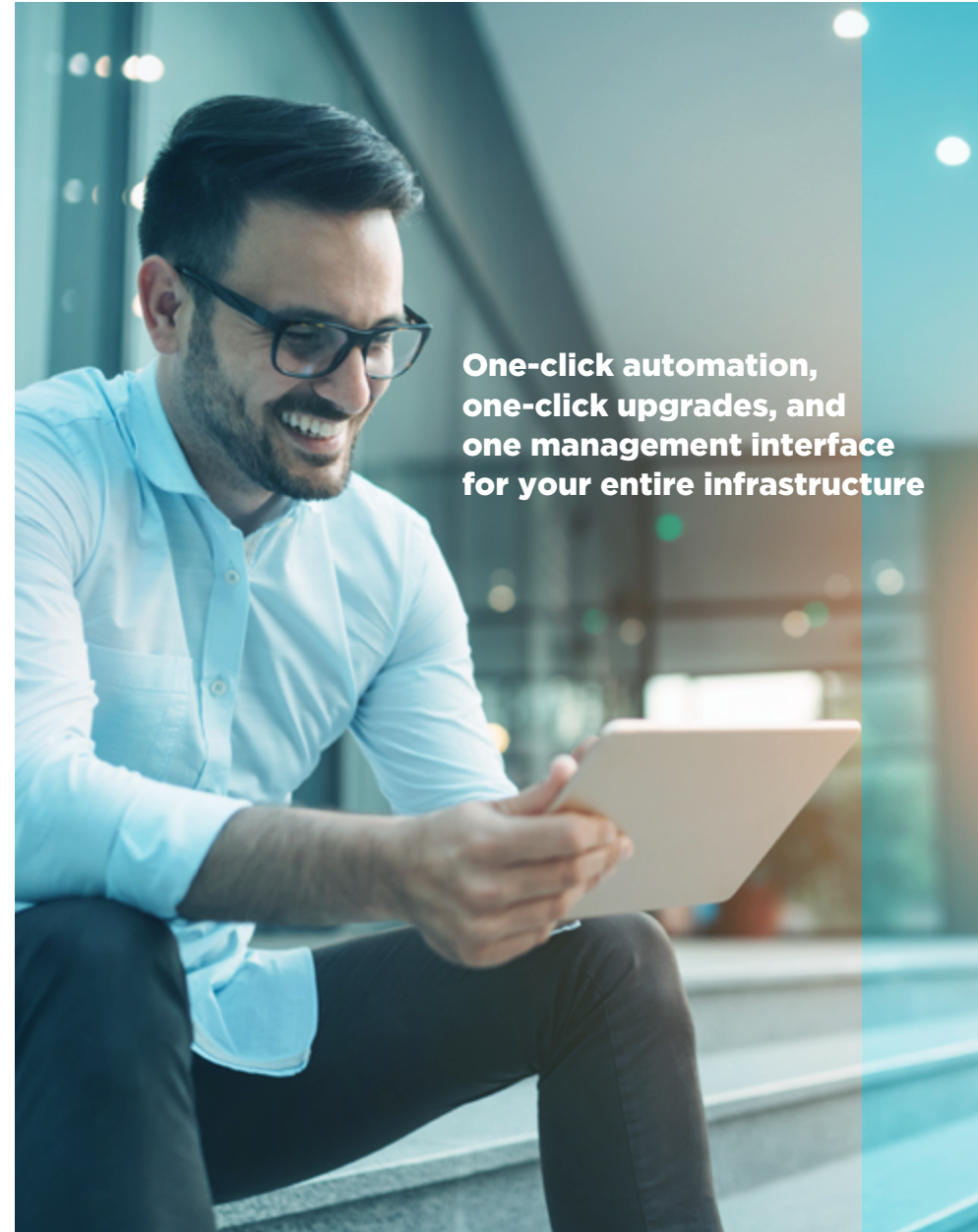
# 1. One-Click Operational **Simplicity**

Traditional infrastructure is composed of multiple layers, each with their own dedicated user interface. Each of these interfaces has its own learning curve, which leads to the need for dedicated specialists in each area. This is part of the reason why many common tasks require extensive collaboration and orchestration across teams, which can slow down initiatives and make it harder to get things done quickly.

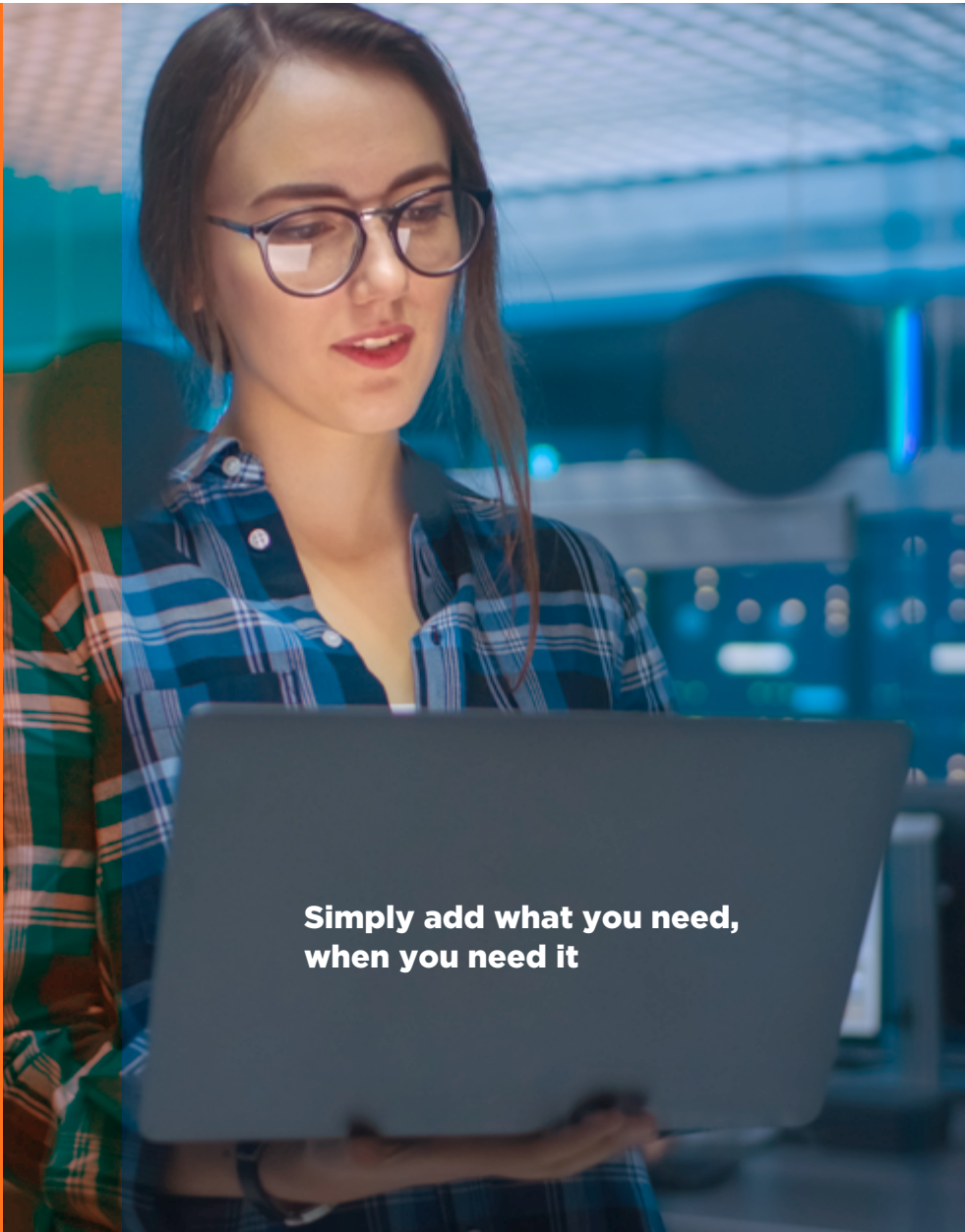
HCI integrates these disparate layers into a single infrastructure platform and user management interface. This enables more generalists to complete tasks without the need to wait on team members or file tickets, resulting in greater productivity. In addition, the streamlined nature of HCI makes it possible to easily automate many of the processes that have traditionally required manual intervention. Advanced HCI solutions like Nutanix leverage built-in intelligent automation to automate deployments at multiple geographically distributed sites simultaneously. It also automates IT upgrades from firmware up through the HCI and hypervisor software layers with integrated lifecycle management.

Likewise, you can immediately benefit from AI/ML-driven capabilities such as automatic capacity forecasting, proactive VM right sizing, and automation geared for specific applications without the need for complex setup or integration. This means one-click automation, one-click upgrades, and one management interface for your entire infrastructure needs.

The result? Dramatically reduced time and effort needed for deploying and maintaining infrastructure, enabling IT teams to focus on needle-moving initiatives.



**One-click automation,  
one-click upgrades, and  
one management interface  
for your entire infrastructure**



**Simply add what you need,  
when you need it**

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## 2. Superior TCO And Scalability

One of the most challenging and expensive aspects of designing and implementing traditional infrastructure is the uncertainty of planning for how many resources will be needed over the lifecycle of the solution. Predicting the future is hit or miss, which is why many companies significantly overprovision to avoid an even worse scenario – not having resources when you need them. This leads to overspending on the initial purchase and can result in cost inefficiencies.

HCI utilizes integrated forecasting and recommendation engines to help eliminate guesswork. Customers can simply add what they need, when they need it. Scale in small increments, so you only need to purchase resources for the foreseeable future. Additionally, compute and storage can be scaled in different ratios, or can be scaled independently when requirements for one type of resource grows faster than others. It also scales the performance and capacity linearly and predictably due to a core architecture that automatically redistributes data as new nodes are added. This delivers improved cost efficiency, allowing IT teams to optimize the placement of their investments.

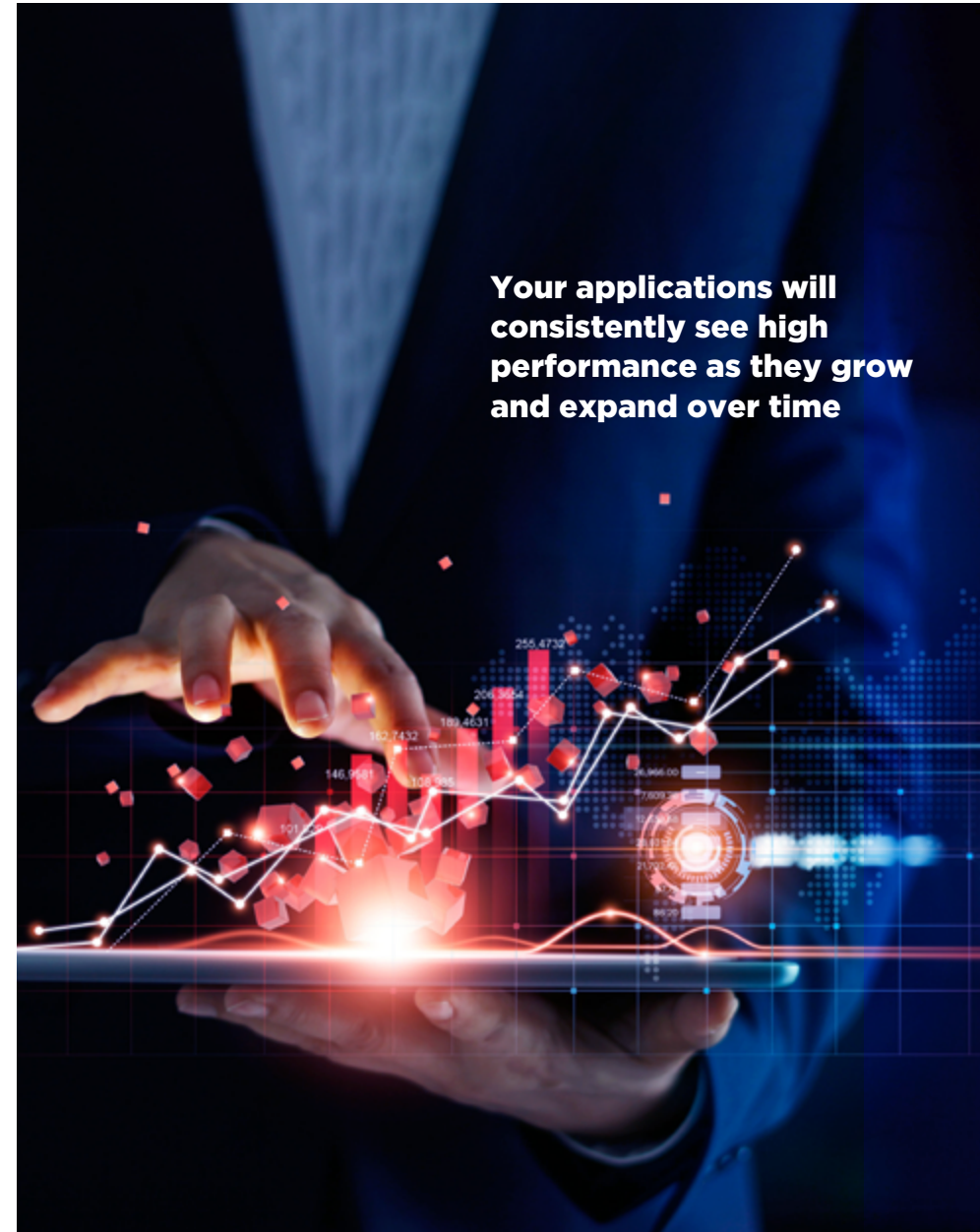
In short, HCI brings the flexibility and scale of cloud to your on-premises storage infrastructure, allowing you to scale non-disruptively and pay as you grow with just a few clicks.

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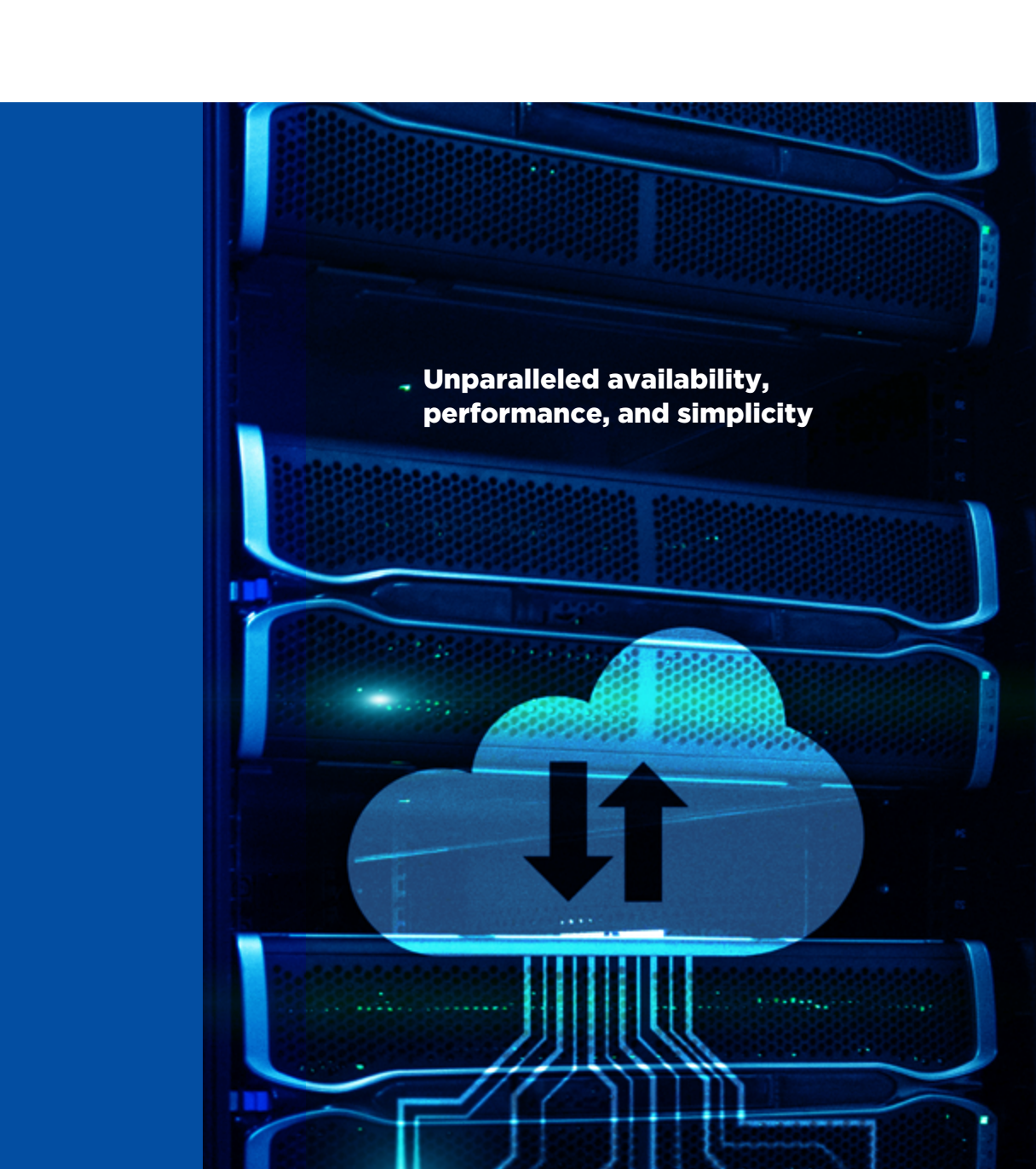
### 3. Performance Optimization

Consistent and predictable performance is key for supporting business-critical databases and applications. This is especially important in dynamic environments where data growth is constant and the business requires continuous accessibility.

One of the significant benefits of HCI is that when more compute and storage resources are added to the environment, storage performance increases linearly along with storage capacity. As a result, your applications will consistently see high performance as they grow and expand over time. This is where data locality comes in. When data is written by an application, one copy is stored on the same node as the application so it can be retrieved without needing to access the network. This not only ensures the lowest possible latency, but it prevents the network from becoming congested even for very large environments. Data locality and integrated storage processing also enable HCI to take maximum advantage of the latest storage hardware innovations including NVMe and storage-class memory.



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**Unparalleled availability,  
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## 4. Continuous Availability From The Ground Up

No one questions the need for sound business continuity and disaster recovery (BCDR) solutions in support of business-critical workloads. However, all companies face competing priorities. Should the budget be allocated for new virtual desktop infrastructure (VDI) to meet increasing demands in support of remote workers? Should it be used to implement an insurance policy in case of disaster, ransomware, or downtime?

HCI ushered in a new BCDR model by enabling applications and workloads to run on a single platform that spans across the entire enterprise, while providing unparalleled availability, performance, and simplicity. By unifying infrastructure into a single data fabric and a single management plane, companies are able to run and protect their applications at any scale with multiple layers of integrated protection, regardless of location.

Advanced HCI architectures distribute infrastructure services across every node in a cluster and use distributed computing algorithms instead of specialized hardware to keep services always up and running, enabling more than five 9s of availability. Clusters are protected from drive, node, and rack failure with automated self-healing algorithms that rebuild from replicas that are intelligently placed within the cluster. Moreover, data is continuously fingerprinted and scrubbed for consistency, and administrators can choose the number of simultaneous failures to protect against, workload by workload. Finally, if and when disaster strikes, VMs can be brought up at other data centers or even in the public cloud, using VM level replication with application consistency and runbook automation for fast and easy recovery. To meet compliance requirements and to protect against ransomware attacks, integration with ecosystem backup technologies makes it easy to store immutable backups for tamper proof protection.

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## 5. Single Consolidated Platform For All Your Workloads And Use Cases

Businesses everywhere are grappling with a wide variety of applications and workloads that run across many different environments. In a traditional 3-tier environment, applications create unique requirements that often result in a need for dedicated silos of infrastructure that are optimized to solve the specific problems.

For example, if your organization implements VDI, it is likely deployed on dedicated infrastructure to prevent issues such as boot storms or recompose operations from negatively impacting your critical database workloads. Likewise, remote offices often have significantly different infrastructure requirements from the datacenter. Cloud-native workloads built in-house are often deployed to the cloud to optimize for agility and deployment simplicity. And there are many more examples like these.

With HCI, you can run all of your workloads on a single platform, all while maximizing performance, resource efficiency, and cost. It enables multiple workloads with greatly different requirements to efficiently run on the same infrastructure platform. A single, unified platform makes it possible for all of your workloads spanning the entire infrastructure stack to be managed harmoniously. HCI also provides a simple, scalable and intelligent software-defined storage solution to consolidate file, object, and block storage all within the same platform. As a result, as IT teams become more proactive and less reactive, they are able to work smarter and can dedicate more time to valuable projects that move their business forward.



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## 6. The **Simplest Path To Hybrid And Multicloud Infrastructure**

In today's era of digital innovation, many organizations need to support cutting edge software services while continuing to manage legacy applications that remain central to business operations. The need to respond quickly to changing business requirements makes public cloud services extremely attractive; however, deployment models differ greatly between traditional infrastructure and public clouds. There is a pressing need for a single platform that can span private, public, and edge clouds so operators can manage their traditional and modern applications side-by-side using a consistent cloud platform.

HCI has rapidly emerged as a foundation for running hybrid cloud IT operations. It has evolved to optimize in-house application development and gives organizations the ability to move data and apps between cloud environments, centralized, and edge datacenters. With the right HCI solution, the onramp to the hybrid cloud becomes easier than ever to navigate. The best HCI solutions today provide the benefits of public cloud while supporting seamless integration and providing a common management platform for a hybrid cloud environment.

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## 7. Integrated Security

Today's cyber attacks are more refined and harder to detect, and sensitive data is more vulnerable than ever. As organizations continue to add newer environments, applications, and cloud architectures into an often already complex IT network, they're unknowingly exposing an array of risks. Relying on perimeter firewalls to keep bad actors off of our networks is no longer sufficient. Tasks like incident response, regulatory compliance, vulnerability scanning, malware analysis, digital forensics, and firewall configuration are time-consuming enough. To add to this, traditional infrastructure stacks are composed of products from multiple vendors, and each component of the stack needs to be secured and kept in compliance independently.

It's time for a proactive approach to security and data protection. HCI creates a trusted foundation for your applications by providing an integrated security-first approach for your infrastructure to protect against threats at every layer. Its unified infrastructure decreases the attack surface for bad actors, and integrated micro-segmentation will prevent successful attacks from spreading throughout your environment. Automated patching makes it easy to quickly respond to zero day vulnerabilities and to remain compliant. Data-at-rest encryption can be implemented with self-encrypting drives (SEDs) and external Key Management Servers (KMS), or it can be done entirely in software without the need for SEDs or KMS. With nothing additional to install or manage, HCI enables you to add FIPS compliant data-at-rest encryption to your environment in minutes. It delivers full-stack security protection out of the box so you can keep your environment secure without blowing past your budget.



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## **8. Protect Your Freedom To Choose And Keep Maximum Flexibility**

Most SAN products are proprietary solutions designed to run purpose-built software on purpose-built hardware. These designs limit choice in platform flexibility on how and where to run your applications and workloads, and they do not easily extend to the cloud.

HCI is a software centered solution designed to run on a wide range of hardware platforms and in the public cloud. This provides IT teams with the flexibility and agility to deploy onto platforms and environments that best suit the business. The most popular HCI technologies today offer a wide choice of hardware and hypervisor along with the flexibility for organizations to scale according to their business needs. HCI presents IT teams with their own choice of storage and data services such as file, block, object, and container services. It is flexible enough to be deployed as a foundation for private clouds and can also be extended to public clouds for unified operations across the hybrid cloud.



## Time To Leave Your SAN In The Past

HCI offers a pragmatic and forward-looking approach to infrastructure, and puts IT in a better position to support business objectives as the pace of digital transformation accelerates. Both **Gartner** and **Forrester** identify Nutanix as a leader in HCI, and for good reason. Instead of just packaging traditional 3-tier architecture into a different form-factor, Nutanix HCI brings cloud-like infrastructure into your datacenter with its unique distributed architecture, enabling all the benefits we've discussed above. The result? A culture with an increased focus on innovation.

**Interested in trying it out? Just go to [Nutanix.com/test-drive](https://www.nutanix.com/test-drive), and access your own test cluster remotely. In just a few clicks, spin up a cluster within minutes in the cloud and access through your browser.**