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Enterprise**

HCI 2.0 FROM HPE POWERING THROUGH TO INNOVATION

GET STARTED >

POWERING THROUGH TO INNOVATION

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From crisis to innovation



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How to evolve and thrive

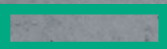


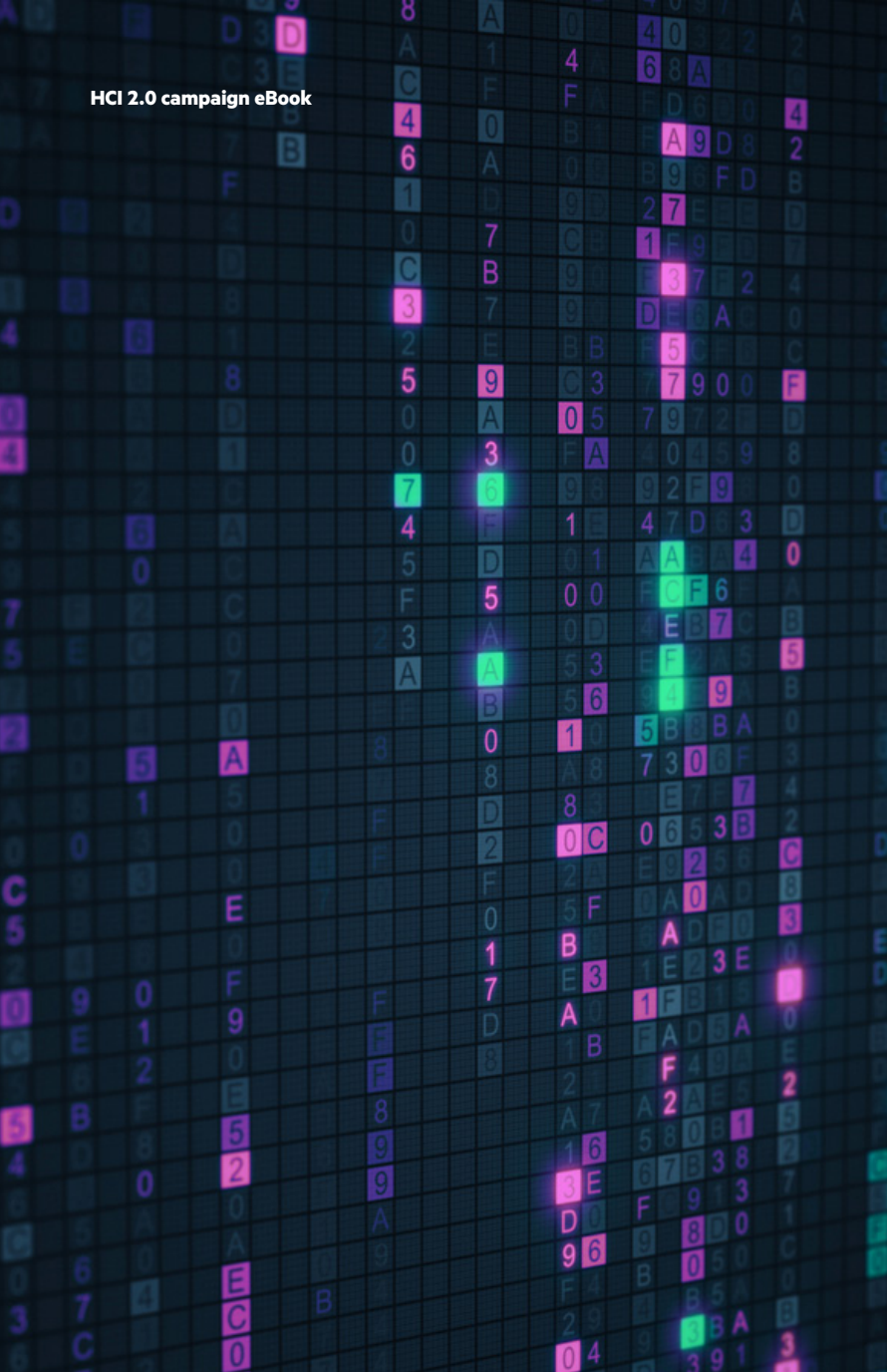
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The intelligence of HCI 2.0
from HPE



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1. FROM CRISIS TO INNOVATION

In a few short months, 2020 has shaken economies and organizations to their core. The future is more uncertain than ever: What will be the state of things next year, or the year after? All we can know for sure is that successful enterprises must stay focused on evolving and innovating to keep up with and pass their competitors.

The [IDC](#) believes we will go through five pandemic phases, each demanding a different focus. They conclude that **innovation is the only viable path** for business recovery.

The five stages of pandemic recovery

Phase	Business imperative
Crisis	Business continuity
Slowdown	ROI
Recession	Operational resilience
Investment	Acceleration
Recovery	Innovation

Source: [IDC](#)

Acceleration and innovation mean embracing agility at scale. [Forrester](#) principal analyst Ted Schadler says:

“Digital transformation was never optional. But most firms treated it that way, applying digital technology in dribs and drabs—until COVID-19 shuttered economies and forever altered the patterns of life and work and commerce. Until uncertainty and volatility became the new normal.

Every company must respond by focusing on its core and smartly outsourcing and orchestrating the resources and innovation of cloud and service partners. With this transformation approach, CIOs can help their company scale its ability to adapt and grow into the post-pandemic era.”



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IT AGILITY DRIVES DIGITAL TRANSFORMATION

Digital transformation, IDC's [Eric Burgener](#) explains, is “the evolution of enterprises of all sizes toward more **data-centric business models** that leverage big data and analytics to improve internal workflows, products, and services as well as drive disruptive improvements in the ability to compete and open up new markets.”

Business in the digital ecosphere is dynamic and fast, and leveraging new methods such as artificial intelligence and machine learning allows businesses to respond rapidly to changes in demand and in newly identified market opportunities. “IT has become more important than ever in providing the enabling infrastructure to support business innovation.”

IT is more important than ever in providing the enabling infrastructure to **support business innovation.**

“Provisioning, performance, availability, scalability, configurability, and functionality are all impacted, and enterprises require new storage architectures and technologies to meet these requirements. Agility has also impacted consumption models, and customers are looking for more flexible ways to acquire infrastructure that include subscription-based, pay-as-you-go approaches,” says Schadler.



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2. HOW TO EVOLVE AND THRIVE

Hyper-converged infrastructure (HCI) has been one way businesses tried to take care of their digital transformation needs. It has enabled companies to get cloud-like power and speed, and to deliver new applications and services anywhere and at any time, all more quickly and securely than before.

HCI does this by combining server and storage resources with intelligent software in a single node, replacing legacy infrastructure consisting of separate servers, networks, and storage. Theoretically this makes it easy to add new capacity—just slot in another node.

But, whilst traditional HCI has driven real value for organizations with predictable, clearly defined workloads, it has a poor track record when workloads, and their growth paths, are less predictable. This is a common issue. To get more compute performance, you must add an entire node with additional storage, memory, and network resources; to get more storage, you must also add compute resources. This lack of granular scaling means any cost savings are offset by the cost of overprovisioning and wasted resources.

“This lack of configuration agility is a concern,” says Schadler. “Maintaining consistent performance can also be a challenge when an application’s data set is too large to fit on a single HCI node.”

Because HCI 1.0 solutions are not always able to meet the intricate requirements of business-critical applications, organizations do not always get the seamless on-premises cloud experience they expected. Instead, there’s an unacceptable trade-off between simplicity and performance.

In short, traditional HCI isn’t cheaper, isn’t always powerful enough and doesn’t address all performance needs.

HCI 2.0 from HPE was developed to solve exactly these problems.



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3. THE INTELLIGENCE OF HCI 2.0 FROM HPE

HCI HAS EVOLVED TO DO MORE

IT is increasingly looking to streamline operations, unlock agility, and do more with less. Hyperconverged infrastructure (HCI) brought an experience that makes it simple to deploy, manage, and upgrade infrastructure. As organizations look to bring this experience to business-critical apps and mixed-workloads, HCI needs to do more to meet the resiliency, performance, and efficiency required.

HCI has evolved to HCI 2.0—with a new architecture that delivers the HCI experience of unified management and VM-centric operations with higher availability, faster performance, and flexible scaling. This enables organizations to simplify operations and unlock agility, while ensuring their applications are always-on and always-fast and at the best economics. HCI 2.0 achieves a lower total cost of ownership (TCO) by scaling compute and storage independently, along with a lower entry cost.

HCI 2.0 “combines the unified and simplified management paradigm of HCI with the capabilities of true enterprise-class disaggregated infrastructure. Unique integration points in this platform include built-in automation software for very simple cluster deployment and scaling and centralized management based on VMware vCenter®. These features, combined with enterprise-class performance, availability, and storage management functionality, also differentiate this platform from other HCI and converged offerings in the market.”¹

“There is no doubt that the platform will broaden the types of larger, more mission-critical workloads that HCI platforms can effectively support.”—IDC

¹ “HPE Introduces a New Disaggregated HCI Architecture with HPE Nimble Storage dHCI,” IDC white paper by Eric Burgener, October 2019.

IT'S INTELLIGENTLY SIMPLE

HPE 2.0 reduces complexity by streamlining IT operations with AI-driven predictive analytics. It's simple to deploy, manage, scale, and support.



Simple to deploy

15 minutes rack-to-apps with server and storage automation



Simple to manage

VM-centric data services and resource management



Simple to scale

Auto-discovers new resources and transparently upgrades



Simple to support

Predictive support automation and problem prevention

ABSOLUTELY RESILIENT AND SECURE

HPE 2.0 is absolutely resilient by design: Costly downtime and firefighting are virtually eliminated with 99.9999% availability.

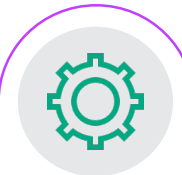
Always-on availability

Guaranteed 6-nines storage availability²



Fault tolerant

No single point of failure, hardware redundancies with the ability to tolerate three simultaneous drive failures



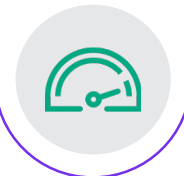
Integrated encryption

Application-level encryption and secure data shredding



Sub-milliseconds latency

As low as 200 microseconds data response time with HPE Nimble Storage All-Flash³



Built-in data protection

Backup more frequently and recover faster with application-consistent snapshots and advances replication



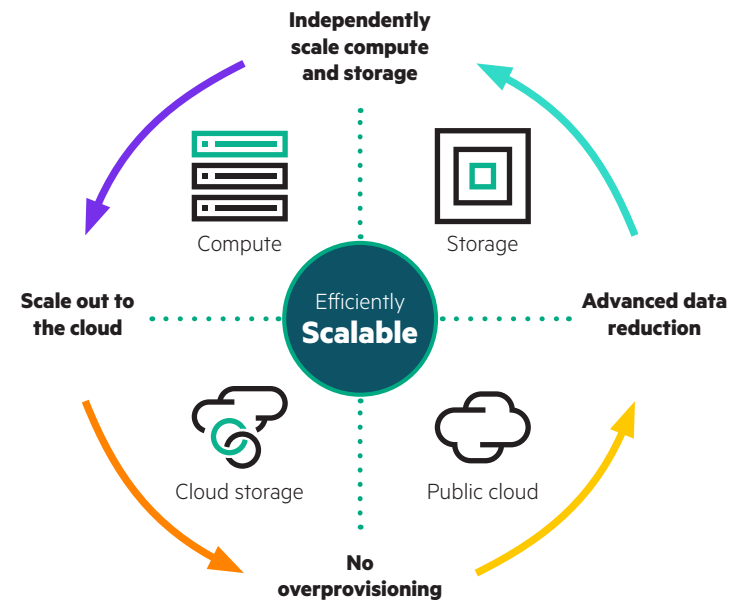
² "HPE Get 6-Nines Guarantee," HPE Nimble Storage, September 2017.

³ "Top 5 reasons to consider HPE Nimble Storage dHCI," February 2020.



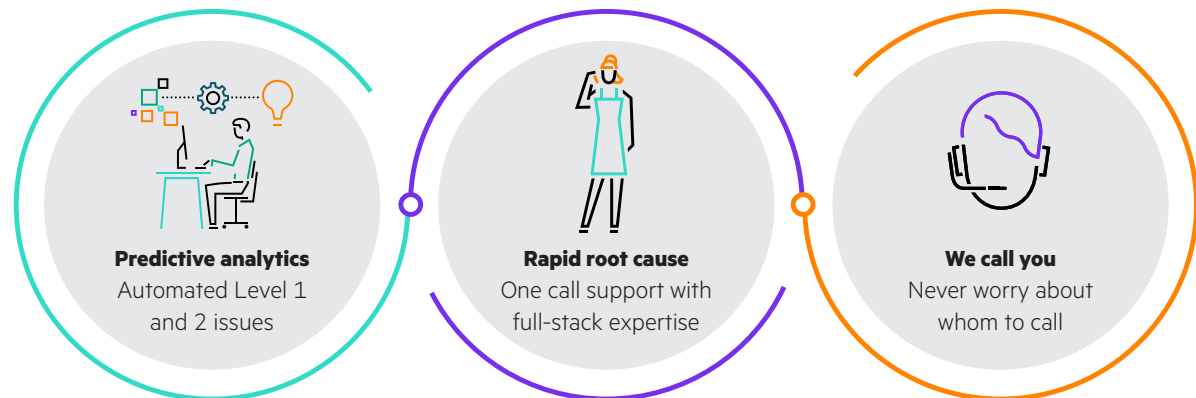
AND EFFICIENT

Unlike traditional HCI, HCI 2.0 achieves a lower TCO by scaling compute and storage independently. HCI 2.0 also allows for a lower cost of entry—you don't need to add unnecessary hardware to achieve resilience, since it fully utilizes the resources you already have.



WITH EXPERT SUPPORT

Businesses have better things to do than fighting IT fires. HCI 2.0 from HPE means time and skills can be used more efficiently because problem solving is left to predictive analytics and expert support services.



^{4,5} "HPE Storage Substantiation," May 2020.

>4.91 out of 5

in support satisfaction⁴

<1 minute

average hold time⁵



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INDEPENDENT EXPERTS SAY...

IDC

Probably the biggest concern with traditional HCI's ability to handle larger enterprise workloads, particularly those with unpredictable growth paths, is that compute and storage resources can be added only in fixed ratios with the addition of a new HCI node. There is little flexibility to add either resource independently, resulting in a situation where one of the resources is always overprovisioned relative to the other. This imbalance can begin to add significant cost as configurations scale in size (in terms of node count and overall capacity).

One solution to these challenges is a "disaggregated" HCI model that pairs the HCI experience with disaggregated compute and storage resources.⁶

Storage review

dHCI has the potential to be a game-changer in the data center as it blends the simplicity of HCI management with the flexibility of deploying storage and compute independently of each other as is done with a traditional data center. In short, HPE has done dHCI right.⁷



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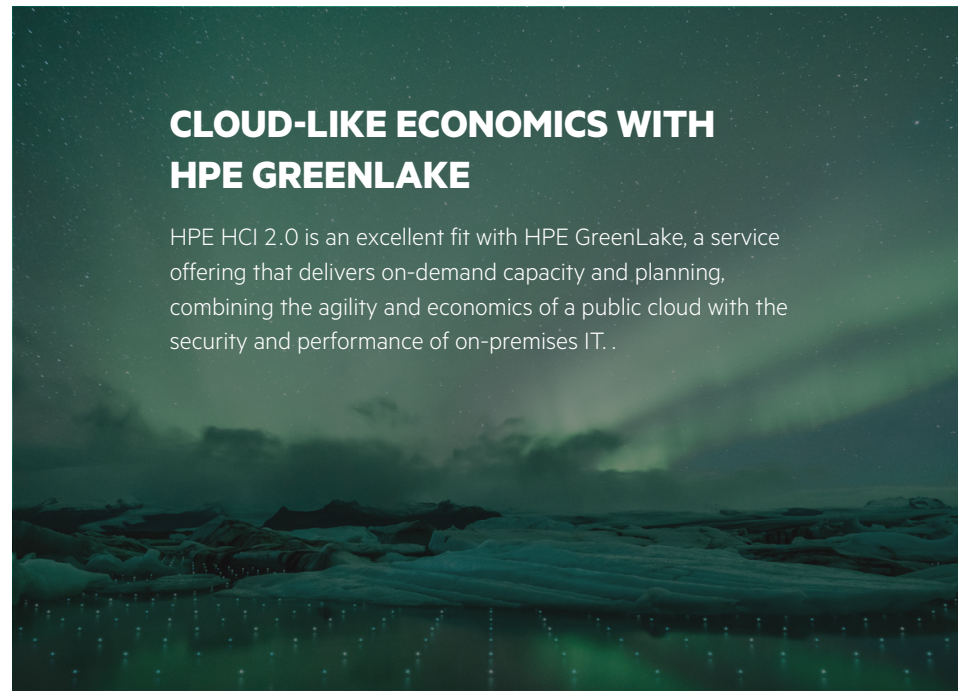
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⁶ "Expanding the HCI Experience to More Workloads: Factors to Consider", IDC white paper by Eric Burgener, August 2020

⁷ [Hands-on with HPE Nimble Storage dHCI](#), January 2021

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a50003942ENW, March 2021



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