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# Unleash IT to Accelerate Radical Business Innovation

Hyperconverged Infrastructure Powered by Lenovo ThinkAgile HX Series with Nutanix

**NUTANIX**



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**Lenovo**



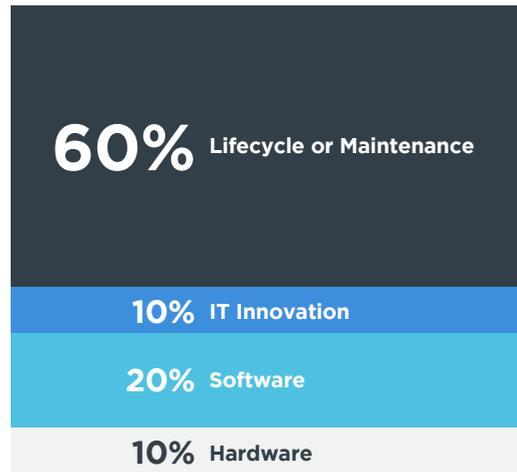
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## COMPANIES ARE EXPERIENCING AN INNOVATION GAP

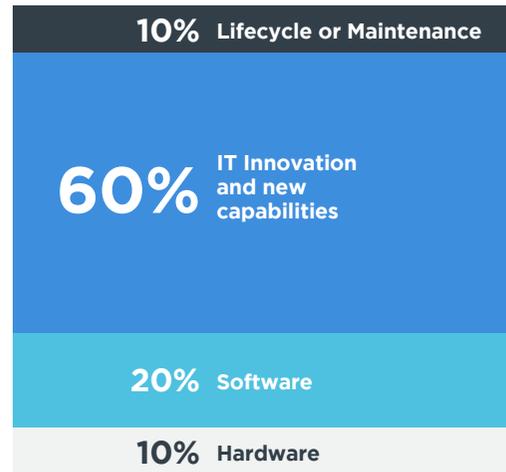
Business expectations and demands on the data center are increasing and the impact on today's data centers is staggering. The IT infrastructure struggles to keep up in a world of accelerating costs and declining operating budgets.

It's the 80/20 dynamic, where 80% of the budget is to maintain the status-quo and keep IT running, while only 20% of the budget is available for innovation for the data center and the business.

### Where organisations are today



### Where organisations want to be



While there is a clear desire to innovate, IDC claims that 80% of annual IT budgets are consumed by maintaining existing infrastructure and services. Yet in another study, Gartner measures growth initiatives as a very top priority by CEOs.

**Organizations that can move quickly to leverage these new opportunities will find themselves in an advantageous position relative to their competitors. BUT Time is NOT on your side!**

IT infrastructure leaders often feel that they're always in catch-up mode because it is difficult to quantify IT contributions.



**IT complains that, despite the increasing penetration of technology into every nook and cranny of the business, it doesn't have a seat at the table and no one understands how difficult their jobs are given the constraints under which they operate.**

The business complains that IT doesn't understand the business, consistently overpromises and under-delivers, and slows innovation.

**HBR: Bridging the Gap Between IT and Your Business**



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## THE IT DEPARTMENT IS UNDER IMMENSE PRESSURE

The focus of the IT department is changing. In the past, IT was concerned with building and maintaining infrastructure. In 2014, around 70-80% of IT budgets were spent on just keeping systems running. Today, the most competitive organizations also expect IT to add business value through useful services.

While IT's responsibilities have increased, budgets and the need to maintain reliable infrastructures remain mostly the same. The growing demands of enterprise applications and the fast pace of modern business threaten to put legacy IT design — with separate storage, storage networks, and servers — at risk of failure.

The silos created by traditional data center infrastructure often present barriers to change and progress, adding complexity to every step from ordering to deployment to management.

### The most common challenges IT departments look to address when deploying converged infrastructure are:

- High capital costs associated with data center resources
- Length of time required to deploy new applications and business services (i.e., time to value)
- Amount of time spent troubleshooting and maintaining datacenter infrastructure
- Difficulties associated with scaling and refreshing datacenter infrastructure
- Application outages due to planned and unplanned infrastructure downtime
- Inability to provide, or test, disaster recovery (DR) capabilities due to costs and complexity
- Operational inefficiencies related to silos of infrastructure requiring different experts to manage
- Low infrastructure utilization rates due to the sprawl of infrastructure islands throughout the organization



By the end of 2019, the need for improved agility, better manageability and enhanced asset usage, will force companies to migrate over 50% of the IT infrastructure in datacenter and edge locations to a software-defined model.

**IDC FutureScape: Worldwide  
Datacenter Report 2017**

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## HOW IT INFRASTRUCTURE SHOULD BE DELIVERED

Data centers of tomorrow will be designed as fluid resources that can immediately adapt to the evolving needs of the business. These resources will be managed as a service through software that is tightly integrated with hardware that is simpler to deploy and manage.



From individual support teams  
to one support team



From individual tool sets  
to common set of tools



From weeks to deploy to hours  
to deploy



From over-provisioned to scale  
without downtime or rip and replace



Secure-by design and not  
as an afterthought



Simple-no specialised skills  
required to operate

Enabling this data center transformation should be a priority for IT and business leaders. Regardless of where organizations are along the way, the bottom line remains the same:

- Infrastructures must be optimized for total cost because IT must do more with less, and expenses must be freed to fund new opportunities.
- IT organizations must become more agile to respond to changes in demand for resources.
- Tools and processes must make them more efficient to react quickly to business requirements.

**To not do so, IT risks being left behind.**

### IT should focus on increasing

- ✓ Reliable repeatability
- ✓ Predictability
- ✓ Operational efficiency
- ✓ Staff agility

### IT should focus on reducing:

- ✓ Capital costs
- ✓ Complexity and errors
- ✓ Operational expenses
- ✓ Time to roll out applications



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## IT'S JOURNEY TO CLOSING THE INNOVATION GAP

To begin closing the innovation gap, IT needs to enable business growth through a simple approach to spinning up workloads, on industry-standard hardware, aligning IT with the business to promote innovation on-premise, and with cloud-like agility and economics.

### What if IT teams can take workloads off the traditional IT infrastructure and migrate it to a purpose built workload solution that:



Integrates compute, memory, storage, and virtualization



Is 100% software defined with built-in analytics

This is what Hyperconverged Infrastructure is all about.

### Hyperconverged Infrastructure (HCI) Simplifies Datacenter Operations

Hyperconverged infrastructure streamlines the deployment, management, and scaling of data center resources by combining x86-based server and storage resources with intelligent software in a turnkey software-defined solution. Separate servers, storage networks, and storage arrays can be replaced with a single hyperconverged solution to create an agile datacenter that easily scales with your business.



Software-defined control and management for ease of provisioning



Virtualization across the architecture (not just compute)



Agility with Scale out architecture that eliminates the need to rip and replace for seamless growth and scale

**More than 50% of workloads are ideal for HCI. The question is not “are you” but “where are you” on the path of HCI**

- ✓ Private & Hybrid Clouds
- ✓ Enterprise Applications
- ✓ VDI
- ✓ Big Data and Analytics
- ✓ Collaboration & UC
- ✓ Branch Office
- ✓ Data Protection & Disaster Recovery



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# HYPERCONVERGED INFRASTRUCTURE IS MAKING ITS WAY INTO THE DATACENTER AND FOR GOOD REASON

With hyperconverged infrastructure, IT departments can stop running around putting out fires – and start innovating with valuable new services. Ideal for all virtual applications, HCI appliances deliver extreme reliability, dependable security, extensive and predictable scalability, simplified management, and faster time-to-value.



## Improved Manageability

- Using many kinds of servers, hypervisors, and storage requires IT departments to spend most of their time on maintenance. Hyperconverged infrastructure helps merge these silos, reducing complexity.
- HCI clusters automatically pool compute and storage into a single shared virtual structure. Resources are utilized more efficiently, and everything is managed through a single interface. Time spent on IT management is dramatically reduced.



## High Availability

- Hyperconvergence offers highly available built-in storage. This means there is no chance that losing either a single disk or an entire node can take down their infrastructure.
- When it comes to the high availability of the compute infrastructure, protecting from server failure is also built in with hyperconvergence.



## Increased Performance and Scalability

- Hyperconverged infrastructure delivers the agility and economics of the public cloud, without sacrificing the security and control of an on-premises data center.
- HCI is a flexible building block of fully integrated and tested compute, storage, and preloaded virtualization management software. This enables scale-out clusters to support business growth easily.



## Lower Total Cost of Ownership

- With compute, storage and virtualization combined in one appliance, IT is much more space and energy-efficient, saving up to 61% on power and space.
- Lower TCO also is driven by the simpler architecture that does not require complex and expensive storage subsystem to achieve the same high level of capability.



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# HYPERCONVERGED INFRASTRUCTURE POWERED BY LENOVO THINKAGILE HX SERIES AND NUTANIX

- Designed to simplify infrastructure and accelerate time-to-value

Now, the industry leader in server reliability and the market leader in hyperconvergence software have joined forces to bring these benefits to data centers of all sizes. The Lenovo ThinkAgile HX Series hyperconverged offering is designed for easy deployment and manageability in scale-out clusters, integrating Nutanix software on to Lenovo's highly reliable and scalable servers.

In addition to the state-of-the-art Lenovo hyperconverged appliances, Lenovo ThinkAgile SX for Nutanix integrates networking and management infrastructure into a single rack-level turnkey system, optimized for larger deployments intended to scale multiple data centers.

To gain a competitive advantage, you need to build your data center on the very best appliances out there. Lenovo ThinkAgile HX Series integrated with core Nutanix software provides:



## Turnkey Infrastructure

Integrated server, storage, networking and virtualization resources along with end-to-end systems management and operations management capabilities.



## Fast Deployment

Deploy infrastructure in minutes, so IT teams can elevate their focus to the applications and services powering the business.



## 100% Software-Driven

Leverage virtualization and software-defined storage to natively collapse core storage, compute, and networking functions into a single pool of resources that are deployed as a scale-out cluster.



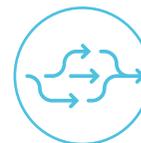
## World-Class Platform

Each hyperconverged server (node), includes Intel-powered x86 hardware with flash-based SSDs and traditional HDDs, along with Nutanix software.



## Superior Performance and Resilience

Nutanix hyperconverged software running on each node distributes all operating functions across the cluster.



## Unprecedented Flexibility

A single cluster can have unlimited nodes, with node types having differing amounts of storage, CPU and memory resources so that you can run multiple workloads with maximum efficiency.



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## LENOVO AND NUTANIX – A WINNING COMBINATION

Lenovo and Nutanix have partnered together for a good reason. Nutanix is the leading software-defined Hyperconverged solution in the industry and rated #1 for vision by Gartner. This is combined with Lenovo's Industry Standard, best in class x86 servers that are #1 in reliability and performance.

Together, the hyperconverged solutions deliver:

**58%**

**lower** total cost of ownership over 5 years

**27%**

**lower** cost than traditional solutions for desktop virtualization

**7.5**

Payback period as short as 7.5 months

**53%**

Up to 53% less power and 69% less data center space

**0**

downtime upgrades

**510%**

average 5-year ROI

**71%**

less time required for ongoing management



Lenovo hyperconverged infrastructure disappears into the background,

so you can focus on your core business.



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## LENOVO XCLARITY INTEGRATED WITH NUTANIX PRISM: MANAGE HARDWARE LIKE SOFTWARE

**Prism is a management solution from Nutanix** that gives administrators an easy way to manage their virtual environments. Prism greatly simplifies managing Nutanix environments by combining several aspects of data center management into a single consumer-grade solution. Prism leverages machine learning technology to mine large volumes of system data and generate actionable insights for optimising all aspects of virtual infrastructure management.

**Lenovo XClarity Administrator** is a centralized resource management solution that is aimed at reducing complexity, speeding response, and enhancing the availability of Lenovo server systems and solutions. Lenovo XClarity Administrator provides agent-free hardware management for our servers, storage, network switches, hyperconverged and ThinkAgile solutions.

**Lenovo ThinkAgile XClarity Integrator for Nutanix** provides IT administrators with the ability to integrate the management features of Lenovo XClarity Administrator and supported Lenovo Converged HX and ThinkAgile HX appliances with Nutanix Prism. Lenovo expands Nutanix Prism server management capabilities by integrating Lenovo hardware management functionality, providing affordable, basic management of physical and virtual environments to reduce the time and effort required for routine system administration.

### Key features include:

#### Increased Uptime

- ThinkAgile HX platform monitoring, display, & event management
- Lenovo proactive platform alerts leveraging Lenovo innovation & IP
- Health status
- Warranty, inventory status

#### Single click management

- Single click launch of XClarity Integrator for Nutanix from Nutanix Prism UI console
- Fast and easy

#### Automated Lenovo server discovery, pre-authentication

- Eliminates manual entry of IP addresses, user IDs, passwords
- Saves time and money

#### Flexible to use XClarity Integrator for Nutanix individually or to use existing external XClarity Administrator

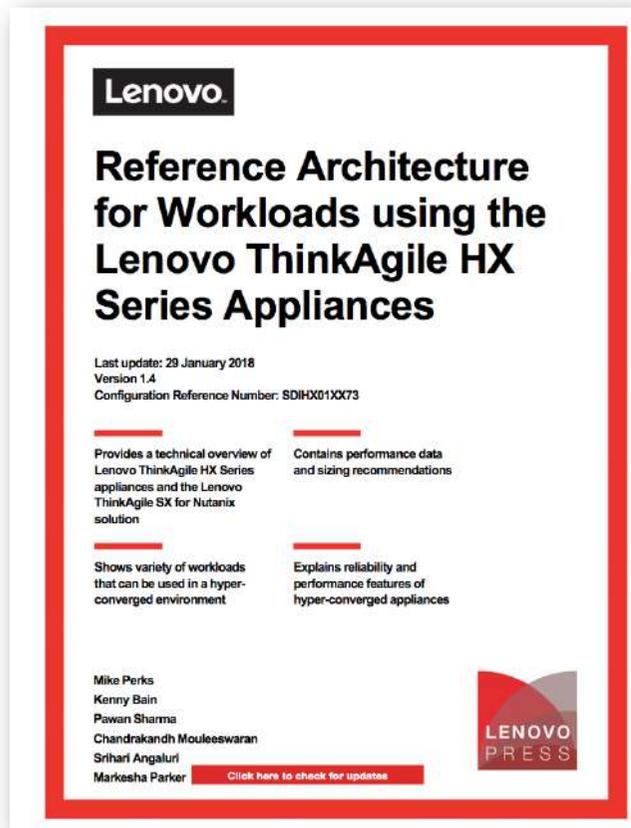
- Select XClarity Integrator for Nutanix individually to get the same list of HX nodes on Prism Central and be managed automatically into XClarity Integrator for Nutanix.



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## REFERENCE ARCHITECTURE FOR THINKAGILE HX SERIES

Lenovo ThinkAgile HX Series appliances are designed to help you simplify IT infrastructure, reduce costs, and accelerate time to value. These hyper-converged appliances from Lenovo combine industry-leading hyperconvergence software from Nutanix with Lenovo enterprise platforms.



Starting with as few as three nodes to keep your acquisition costs down, the Lenovo ThinkAgile HX Series appliances are capable of immense scalability as your needs grow. This reference architecture for workloads using the Lenovo ThinkAgile HX Series Appliances:

- Provides a technical overview of Lenovo ThinkAgile HX Series appliances and the Lenovo ThinkAgile SX for Nutanix solution
- Shows variety of workloads that can be used in a hyperconverged environment
- Contains performance data and sizing recommendations
- Explains reliability and performance features of hyper-converged appliances

[Download the complete reference architecture](#) →



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## ACCELERATE DIGITAL TRANSFORMATION BACKED BY LENOVO DEPLOYMENT & THINKAGILE ADVANTAGE

Lenovo integrates the systems, software and services, and offers a single point of support to deliver a cohesive experience to the enterprise. The "White Glove Deployment Services" ensures seamless hardware installations and deployment of Nutanix software.



### Pre-deployment

- Sold, shipped and supported by Lenovo as a single unit, pre-configured, ready to deploy
- Pre-deployment worksheet



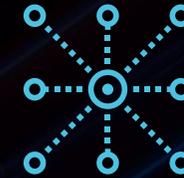
### Onsite Deployment

- Best recipe firmware from factory
- Installation Services
- Deployment Services
- Knowledge transfer



### Post Deployment

- Single point of support from Lenovo
- Uniform, tailored support across the entire solutions (includes hw & sw)
- Best recipe firmware - kept up-to-date
- All updates, SW + FW, are continuously validated by Lenovo
- 3 year standard warranty



**If you need support, Lenovo ThinkAgile Advantage gives you a direct phone line to a team of experts who support only ThinkAgile solutions.**

The experts will rapidly diagnose any hardware or software issues and remain with you as the single-point-of contact throughout the entire support process.



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#### CASE STUDY

## REVVING UP THE RELIABILITY OF ITS IT SERVICES WITH HCI SOLUTIONS FROM LENOVO AND NUTANIX

Heartland Automotive Services, dba Heartland Jiffy Lube, is a dynamically growing oil change and car service provider. Operating more than 550 locations and serving almost 5 million guests each year with nearly 5,000 professional teammates, Heartland strives to provide a 'WOW experience' for every valued guest on every visit.

Heartland Jiffy Lube found that its diverse and aging IT infrastructure was increasingly impacting operations and employee productivity. To boost availability and reliability, the company implemented a hyperconverged solution to support a hybrid cloud environment – radically simplifying its infrastructure. Today, Heartland Jiffy Lube has peace of mind that IT systems will run uninterrupted; all while leaving room for growth.

[Read Full Case Study](#) →

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#### CASE STUDY

## HELPING CLIENTS KEEP THEIR BUSINESSES RUNNING SMOOTHLY WITH HCI SOLUTIONS FROM LENOVO AND NUTANIX

Headquartered in London, Canada, PartnerIT is a regional leader in IT services, offering everything from private cloud to managed print services that help companies big and small get the most out of their IT without breaking the bank.

To keep its cloud services running like clockwork even as its clients' data exploded, PartnerIT wanted the ability to scale its infrastructure rapidly. By embracing a hyperconverged compute and storage environment PartnerIT boosts performance, increases reliability and enables straightforward scalability – helping it provide outstanding services now and in the future.

[Read Full Case Study](#) →

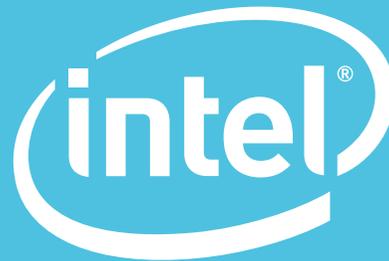
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NUTANIX

The Resilience, Scalability and Performance to Run All of Your Applications Without Compromise.

Experience the Future-Defined Data Center  
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