

# Magic Quadrant for Hyperconverged Infrastructure

Published 27 November 2018 - ID G00353085 - 45 min read

By Analysts [John McArthur](#), [Kiyomi Yamada](#), [Philip Dawson](#), [Julia Palmer](#)

---

Hyperconverged infrastructure solutions are making substantial inroads into a broader set of use cases and deployment options, but limitations exist. I&O leaders should view HCI solutions as tools in the toolbox, rather than panaceas for all IT infrastructure problems.

## Strategic Planning Assumption

By 2022, as a result of digital business projects, 75% of enterprise-generated data will be created and processed outside the traditional, centralized data center or cloud, up from less than 10% in 2018.

## Market Definition/Description

Hyperconverged infrastructure (HCI) is a category of scale-out software-integrated infrastructure that applies a modular approach to compute, network and storage on standard hardware, leveraging distributed, horizontal building blocks under unified management. HCI vendors either build their own appliances using common, off-the-shelf infrastructure (hardware, virtualization, operating system), or they engage with system vendors that package the HCI vendor's software stack as an appliance. Alternatively, HCI vendors sell their software directly to end users, through resellers and integrators, for use as part of a reference architecture, or on an HCI-as-a-service basis, either on-premises or in a public cloud.

Early HCI offerings were deployed to serve a limited set of use cases and workloads (for example, virtual desktop infrastructure [VDI], virtual machine consolidation, and test and development) in centralized data centers of large organizations. They also were implemented as the consolidated infrastructure for midsize enterprises seeking operational simplification.

IT leaders should remain cognizant of the origins of HCI suppliers and the strategic importance of HCI within these vendors' larger portfolios. Some vendors approach HCI from a storage virtualization and data management perspective, partnering for all other components of the HCI stack (hypervisor, network virtualization, management). Others approach HCI from a server virtualization perspective and add storage virtualization and data management services later. Many server vendors approach HCI from a hardware appliance perspective as the natural evolution of their installed base of x86 servers. These server vendors either acquired an existing HCI or hyperconverged integrated system (HCIS) company or partnered with multiple HCI companies to deliver appliances or reference architectures. A few startups approach HCI from a full-stack perspective, willing to compete head-to-head with leading hypervisor suppliers by initially focusing on a single niche. Some approach remote office/branch office (ROBO) and edge requirements strategically, while others address these requirements reactively. Finally, one HCI vendor, Microsoft, is also a public cloud vendor. For Microsoft, the hypervisor and storage and data management services are no-additional-charge features of a larger software offering, and public cloud is an integral part of the strategy. For most HCI vendors, the public cloud is an extension of the strategy, but also could be a strategic threat.

During the past year, Gartner has witnessed increased consideration of HCI in business-critical enterprise applications. With this change, users have increased their scrutiny of support and application certification. At the same time, HCI vendors have expanded their strategy to embrace hybrid/multicloud deployments, as either backup targets or disaster recovery options, or as an alternative for on-premises infrastructure for unpredictable or cyclical resource requirements. A greater number of vendors that previously offered only appliance solutions (HCIS) are now offering software-only and reference architecture options.

The HCI vendors that historically were data-center-focused have begun to target the needs of remote office and edge environments, previously only served by niche vendors. Small remote office and edge deployments require less storage capacity, fewer compute resources and fewer features, but benefit greatly from centralized management and high-availability designs. Much of the focus for this segment is on software that can be run on minimally configured servers that will support high availability with two-node clusters. Finally, HCI vendors are recognizing the asymmetrical scaling requirements of IT (compute, storage and network resource requirements do not always scale at the same rate) and offering more compute-only, storage-only and software-defined networking options. Other vendors are operating outside the sphere of Gartner's strict definition of HCI and are designing solutions from the outset that offer unified management, but are designed to scale compute and storage resources independently. These solutions look much like integrated infrastructure solutions, but with scale-out architectures for back-end storage.

Gartner started providing a complementary view of the HCI software-only market in 4Q17 (see

“Market Share Analysis: Data Center Hardware Integrated Systems, Worldwide, 4Q17”). However, readers should note that HCIS forecasts and vendor market share data as a part of the integrated system market (see “Market Definitions and Methodology: Integrated Systems”) do not correlate with this HCI Magic Quadrant and its companion Critical Capabilities research. The HCIS statistics and forecast are based on a branded hardware appliance view of the market, irrespective of the developer of the underlying software-enabled capabilities. Thus, vendors with revenue and market share within the HCIS market have been excluded from this Magic Quadrant if they partner for the core storage virtualization and data management technology. Likewise, vendors appearing in this research may not appear in the HCIS market share report because they do not offer a hardware appliance under their own brand.

## **Magic Quadrant**

Figure 1. Magic Quadrant for Hyperconverged Infrastructure



As of November 2018

© Gartner, Inc

Source: Gartner (November 2018)

## Vendor Strengths and Cautions

### Cisco

Cisco is a global provider of networking, security and other IT infrastructure. Cisco HyperFlex was introduced in April 2016. The solution, delivered as an appliance, integrates Cisco's Unified Computing System (UCS), which combines compute and Network Fabric, Intersight cloud-based management, third-party hypervisors, and HX Data Platform data and storage management software, originally developed by Springpath, which Cisco acquired in September

2017. Cisco drives lead generation and sales through partner and customer education programs, by leveraging its Proof of Value program for head-to-head comparisons with competitors, and by providing partners with competitive takeout incentives. Cisco customers can purchase HyperFlex through resellers and service providers, with a small number of customers buying direct. Cisco HyperFlex is available only on Cisco servers. Over the past year, Cisco has shown a rapid pace of new capability announcements and integrations with its broader portfolio. Initially focused on critical data center workloads needing high performance and scalability in a VMware environment, HyperFlex has expanded its capabilities across a broader set of deployment and workload requirements.

## Strengths

- Cisco is a global, financially stable supplier with a well-established channel and mature worldwide sales, service and support capabilities.
- Cisco HyperFlex customers benefit from one-stop-shop support for Cisco's compute, networking, management, security, application performance management and multicloud application life cycle management capabilities.
- Cisco HyperFlex is enhanced with Intersight, a cloud-resident monitoring and management service providing predictive failure analysis, alerting, proactive problem resolution through a recommendation engine, and remote edge deployment and management for HyperFlex Edge (for ROBOs).

## Cautions

- Customers standardized on competing server suppliers cannot utilize that hardware to run the HX Data Platform, as Cisco has no software-only, hardware-independent offering and no server integration partners.
- Cisco customers that want to run low-cost HCI on UCS E-Series Servers on Cisco Integrated Services Routers (ISRs) must choose an alternate HCI offering.
- Cisco's hypervisor partners, Microsoft and VMware, both offer full-stack solutions on a broad range of competing server platforms.

## DataCore

Founded in 1998, the privately held firm operates global sales, support and service from headquarters in Ft. Lauderdale, Florida, and through worldwide subsidiaries and distribution partners. DataCore has been known mostly as a global provider of software-defined storage (SDS) infrastructure and storage virtualization, with thousands of deployments predominantly in North America and Europe. DataCore's Hyperconverged Virtual SAN was launched in 2014

and is based on the mature DataCore SDS SANsymphony product. DataCore has a broad set of data services, storage virtualization, data protection and replication services. The vendor features adaptive parallel input/output (I/O) technology to improve overall I/O throughput and response times. It offers software-only solutions either from partners, value-added resellers (VARs) or OEMs. DataCore partners at the field level with the server sales teams and reseller channels of Cisco, Dell EMC, Fujitsu, Hewlett Packard Enterprise (HPE), Lenovo and Supermicro. Customers can get Level 1 and Level 2 DataCore support through server suppliers that integrate the software and through authorized partners, or directly from the company. DataCore's brand awareness is higher in EMEA, where it has continued its expansion. Over the past 12 months, DataCore completed a modernization of its corporate brand and website, expanded channel sales, and established new marketing and management teams.

## Strengths

- DataCore customers can scale storage and compute independently, and leverage existing SAN solutions and x86 servers through a single managed DataCore solution.
- DataCore is a popular choice for ROBO computer rooms, small satellite data centers, and small and midsize businesses (SMBs), as it requires only two nodes for high availability and offers a robust set of data services, tiering and high-availability solutions.
- DataCore has a long track record of supporting latency-sensitive, business-critical enterprise applications, with a performance-optimized data layout in its SDS architecture, and has validated its performance through SPC-1 performance benchmarks.

## Cautions

- DataCore is known among IT leaders as a high-performance SDS solution, but lacks visibility as an HCI product and is rarely considered for large enterprise deployments.
- Without a fully integrated appliance, implementations often require the assistance of an integrator, which, according to end-user references, does not provide a consistent deployment experience.
- DataCore cluster upgrades tend to be complicated and are not fully automated.

## Dell EMC

The Dell EMC brand provides the products and services of the infrastructure solutions group within Dell Technologies. Dell EMC has an expansive product line marketed as hyperconverged systems to meet diverse customer needs. The vendor's flagship product is a turnkey appliance, VxRail (introduced in 2016) and a rack-scale software-defined solution called VxRack SDDC, both of which are co-engineered with VMware. For multihypervisor implementations, Dell EMC

offers rack-scale VxRack FLEX and VxFlex Ready Nodes, based on VxFlex OS as well as XC Series appliances based on Nutanix. Through its many HCI product lines, Dell EMC addresses a broad set of use cases across midsize businesses, global enterprises and service providers for VDI, virtual server infrastructure, ROBO environments, cloud IaaS/SaaS and mission-critical business applications. Dell EMC has significantly improved its sales support for VxRail throughout 2018 by leveraging its robust direct sales as well as its channel partners worldwide, and has repositioned VxRail as a go-to product in its marketing messages. Throughout last year, Dell EMC focused on broadening PowerEdge server model choices for HCI, simplifying the user experience through automation and LCM of both the underlying hardware infrastructure and HCI software, and delivering product enhancements that extend into service delivery. Over the past year, Dell EMC has improved the VxRail release cycle to include the latest vSAN software within 30 days of general availability with VMware. Gartner analysis of Dell EMC does not include vSAN Ready Nodes. All vSAN Ready Nodes offerings are evaluated under VMware, regardless of the hardware partner. Our evaluation also does not include Dell EMC XC Series, which is included under the evaluation of Nutanix.

## Strengths

- As a result of Dell EMC marketing and sales execution, VxRail is now deployed across a wide range of verticals and geographies, and is being shortlisted by most Gartner end users looking for an HCI solution.
- Dell EMC's comprehensive approach to HCI provides choices in operating environments and deployment models to address a broad range of customer requirements.
- Dell EMC provides comprehensive, single-point-of-contact support for hardware, hypervisor and software issues of its HCI products.

## Cautions

- Dell EMC VxRail relies on VMware's software release cycle, which limits its ability to innovate its HCI stack.
- Dell EMC does not have a single management stack across different HCI solutions in its portfolio.
- Gartner end users often find the Dell EMC portfolio of hyperconverged products and all its variances difficult to navigate.

## HPE

Hewlett Packard Enterprise (HPE) is a global provider of professional services, software, servers, storage, networking and other IT infrastructure. HPE SimpliVity was introduced in May

2017. The solution, delivered as an appliance, integrates HPE servers, third-party server virtualization software and data services for storage efficiency functions from the vendor's acquisition of SimpliVity in February 2017. Optionally, the solution offers software-defined networking from the company's acquisition of Plexxi in June 2018. HPE drives lead generation and sales through special incentives for HCI customers; online, cloud-based demos and proofs of concept (POCs) to prospective customers; and total cost of ownership (TCO) and ROI calculators to estimate value. Customers can acquire HPE SimpliVity through resellers, with a limited number of customers and service providers able to buy direct. Over the past year, HPE has expanded hypervisor support and introduced models leveraging HPE's latest-generation servers, models without hardware-based acceleration and models with integrated networking. Initially focused on the requirements of SMBs and larger remote office requirements, HPE has increased its capabilities to meet the needs of smaller remote sites and specific workloads in larger enterprises. In large data centers, HPE SimpliVity is often implemented together with HPE Synergy and HPE OneSphere.

## Strengths

- HPE is a global, financially stable corporation with a well-established channel and mature worldwide sales, service and support capabilities.
- HPE customers have access to a comprehensive portfolio of hybrid IT solutions that includes SimpliVity, OneSphere, OneView, Synergy and ProLiant for Microsoft Azure Stack.
- HPE offers GreenLake Flex Capacity for HPE SimpliVity for consumption-based pricing of HCI and automated technology refresh management.

## Cautions

- Customers standardized on competing server suppliers cannot use the SimpliVity solution, as HPE has no server-independent offering and no OEM strategy.
- Competing HCI vendors are actively marketing and winning deals based on their ability to run their software on HPE ProLiant servers.
- HPE's hypervisor partners, Microsoft and VMware, both offer full-stack solutions on a broad range of competing server platforms.

## Huawei

Huawei, a global infrastructure vendor based in China, leverages its FusionCube brand, which was an early-integrated infrastructure system in 2013 and is now positioned as an HCI platform for its 2018 HCI initiative. The product includes storage, Huawei's own KVM-based and Xen-based FusionSphere hypervisors, as well as support for VMware. This is managed by



FusionCube Center. Since April 2018, Huawei has added further SAP HANA database support, and has improved storage performance and DBMS support. FusionCube can be used for a broad range of applications, but primarily is used by midsize enterprises for high-density, server-virtualized workloads; VDI, database and mission-critical applications, including Oracle and SAP HANA; edge and ROBO environments; and hybrid cloud installations. It also integrates with Amazon Web Services (AWS) for backup, and provides integration with Azure and Azure Stack. Huawei's presence is still limited in the U.S. market, where concerns of cybersecurity threats from Chinese vendors remain. FusionCube's growth has been leveraged from the company's networking business in Asia, Europe, Africa and South America. Over the next year, Huawei will remain strong in China because SAP, Oracle and Microsoft are limited in investing in capacity to host the Chinese market.

## Strengths

- FusionCube, positioned as HCI, is now well-established and proven in Asia and EMEA across multiple verticals.
- Huawei customers benefit from the vendor's strong foundation of ecosystem partners, including Oracle, SAP, VMware, Microsoft, Red Hat and SUSE.
- FusionCube use cases for cloud, edge, ROBO and VDI leverage Huawei's installed base of network infrastructure.

## Cautions

- Huawei has limited market presence, third-party support and certification for its FusionCube and related products in North America.
- Huawei's presentations and roadmaps are not always consistent with its ability to deliver promised features and functions.
- FusionCube storage functions, such as deduplication, backup and recovery tool integration, and inconsistent management capabilities, need benchmarking compared to more mainstream products.

## Maxta

Maxta, a private company founded in 2009, launched its software-defined storage product in 2013. Maxta offers Hyperconvergence Software, a product that enables organizations to create hyperconverged architecture from the x86 hardware of their choice. Hyperconvergence Software offers support for VMware ESXi, Red Hat Virtualization and Red Hat OpenShift Container Platform. Maxta has feature-rich data services and granular quality of service (QoS) and application configuration capability. It is designed from the ground up to be hardware-

agnostic and able to run on all industry-standard x86 servers. Maxta HCI software can be deployed with most major server vendors, including Cisco, Dell EMC, HPE, Huawei, Lenovo, Quanta, Supermicro and others. End users can choose from preconfigured, prevalidated solutions or bring their own server hardware. Over the past 12 months, Maxta added cloud-based proactive maintenance analytics and support for Red Hat Virtualization. Maxta originally was focused on small and midmarket enterprises and VDI deployments, but recently has grown in adoption across multiple geographies and a broader set of use cases. Maxta's "Hyperconvergence Your Way" marketing message, focused on hardware flexibility, is attracting IT leaders looking for a software HCI product.

## Strengths

- Maxta HCI software supports a wide variety of server hardware platforms and can often leverage existing x86 servers.
- End users comment on lower-than-competition TCO due to better hardware utilization and the ability to transfer software licenses during hardware refresh.
- Reference customers mention a positive experience and prompt attention when contacting Maxta support and engineering services.

## Cautions

- Enterprise clients with complex requirements may be unaware of Maxta due to its limited marketing and sales capabilities compared to the competition.
- Gartner clients do not frequently shortlist Maxta for large-scale deployments as they are hesitant to make large investments in a relatively small software vendor.
- Customers considering Maxta must often navigate multiple alternative offerings available on the same server platform, including the server suppliers' own HCI products in addition to products based on other HCI vendors' software.

## Microsoft

Microsoft is a global provider of infrastructure and application software and cloud services. Windows Server 2016/2019 Datacenter Edition – which includes Microsoft's Hyper-V server and Storage Spaces Direct software virtualization, released in October 2016, together with Microsoft System Center – provides the core functionality of Microsoft HCI. Microsoft drives leads by positioning Microsoft HCI as a key component of Microsoft Cloud that includes Microsoft Azure, Azure Stack and HCI. Microsoft relies on an extensive server, reseller and system integrator network for sales. In the past year, the vendor has released the Windows Admin Center, which provides browser-based management for Windows Server and includes a

dashboard for Microsoft HCI. Microsoft has more than doubled the number of prevalidated hardware platforms for Microsoft HCI, released Windows Server 2019 Datacenter Edition, added Azure Site Recovery for backing up VMs to Microsoft Azure and added Azure File Sync for tiering files into Microsoft Azure.

Microsoft HCI should be considered for cloud, edge, ROBO and consolidated use cases for customers adopting Windows Server and Microsoft Azure.

## Strengths

- Microsoft Windows Server 2016/2019 Datacenter Edition customers can implement a full HCI stack without licensing additional software from any other vendor.
- Microsoft can meet the needs of customers seeking a single-vendor, integrated experience for edge, ROBO, data center, hybrid and cloud deployments.
- Most organizations are already using Microsoft server software, and the adoption of Microsoft's HCI stack will require limited additional training.

## Cautions

- Organizations that have standardized on the hypervisor of a Microsoft competitor and have Enterprise License Agreements (ELAs) in place, as well as those that have a multihypervisor and multicloud strategy, will have challenges gaining the full value of Microsoft HCI.
- Without an ELA, Services Provider License Agreement or volume purchase agreement, Microsoft's Datacenter Edition, the only edition to include Storage Spaces Direct, is costly when compared to many HCI alternatives that support Hyper-V.
- Microsoft was late to market with Storage Spaces Direct, and many IT leaders are unaware of the vendor's capabilities, especially when compared with Microsoft's most vocal HCI competitors, which market directly to executives.

## Nutanix

Nutanix, founded in 2009, is a global and rapidly growing IT solution company. The Nutanix Enterprise Cloud OS was introduced in 2011. The solution, delivered as software and hardware appliances (Nutanix and OEM-branded), and as a cloud service (under Nutanix' early access program), combines storage, hypervisor, security, software-defined networking and management. Nutanix drives lead generation and sales through targeted executive-level marketing and a high-touch sales force combined with a hardware-neutral model that expands customer choice. Customers can acquire Nutanix as software or as an appliance through resellers and server suppliers (Lenovo, Dell EMC, Fujitsu and IBM). Over the past year, Nutanix

introduced new software capabilities and hardware models targeting edge and ROBO deployments. The vendor also released new products, including software-based data encryption at rest; Calm for application and IT automation; Flow for software-defined networking, Beam for cost and security compliance; and Epoch for application visualization and performance management. Initially focused on applications within the data centers of larger organizations, Nutanix has expanded its focus. This includes a broad set of applications and deployment locations (cloud, ROBO and edge), a broader customer set (SMBs and service providers) and added support for IBM Power Systems, non-x86 servers.

## Strengths

- Nutanix has proven user acceptance with rapid growth, consistently high Net Promoter Scores and high repeat sales.
- Customers value Nutanix's flexibility that accommodates a broad range of customer preferences for hypervisors, server platforms and deployment models.
- Nutanix customers benefit from a rapidly growing and supportive user and partner community, as evidenced by the dramatic increase in attendance at the vendor's .NEXT conferences.

## Cautions

- The ability to perform highly valued one-click HCI software upgrades does not extend to upgrades of firmware on some third-party platforms on which the Enterprise Cloud OS is deployed.
- Some business-critical applications, most notably those based on Red Hat Enterprise Linux (RHEL), are not certified by the operating system or application vendor for AHV, forcing customers to maintain their current hypervisor.
- Adoption of Nutanix AHV trails the leading hypervisor vendors, and some customers that have made a significant investment in VMware and Microsoft ELAs and training have difficulty justifying the switching costs of moving to AHV.

## Pivot3

Pivot3, founded in 2002, is a global provider of HCI solutions, including surveillance, security and IoT/edge. The vendor has a large installed base, including defense, intelligence and civilian agencies, state and local governments, transportation, and hospitality/gaming industries. Pivot3's Acuity platform, featuring policy-based QoS software, serves multiple, mixed-application workloads on HCI. It targets a broad range of applications, but is used primarily by enterprises for high-density and virtualized workloads, including VDI, database and mission-

critical applications at ROBO or edge locations. The broader functionality of Acuity, including NVMe-level high-performance offerings, has led to significant increases in deal size and expanded HCI capabilities for hybrid clouds (Acuity Cloud Edition) and consolidation of virtualized workloads. Pivot3 customers benefit from a growing reseller and server partner network. The vendor has increased its investment in partner development in 2018. The partnership with Lenovo has extended its geographical reach by enhancing local sales and support capabilities. Its newly created named-account team contributed to larger initial deals.

## Strengths

- Pivot3's HCI capabilities to run multiple and mixed application workloads, supported by the policy-based QoS engine, attract users requiring robust data services.
- Pivot3's partnerships with Lenovo and other global system providers offer customers expanded global coverage, including in emerging regions such as in Africa and India.
- Customers have praised Pivot3's pre- and postsales support and ease of use.

## Cautions

- Pivot3 has broadened addressable workloads, including hybrid clouds and consolidation of virtualized workloads. However, among Gartner clients, the vendor has yet to gain the broad market recognition to make the initial shortlist for customers seeking HCI implementations beyond VDI and related video analytics applications.
- Pivot3's integrated hypervisor support is limited to ESXi, although other hypervisors such as Hyper-V or KVM can be supported as an external host to a Pivot3 HCI system.
- Pivot3 partner Lenovo offers multiple alternative offerings that compete directly with Pivot3, which can make decisions more complex for customers.

## Red Hat

Red Hat is a global provider of Linux-based stacks of open-source software for enterprise on-premises and cloud-based maintenance contracts. Red Hat Hyperconverged Infrastructure for Virtualization was released in June 2017 on top of its own KVM hypervisor and Gluster storage virtualization. Also, Red Hat released Red Hat Hyperconverged Infrastructure for Cloud in 2018, and packaged it with its Ceph Storage and OpenStack solutions. Sales and support for Red Hat's enterprise Linux distribution, virtualization and cloud platforms are available to customers through an extensive server, reseller and system integrator network. In the past year, Red Hat has added its HCI cloud offering to its virtualization offering. This includes integrated deduplication and compression capability via the acquisition of Permabit and a unified life cycle for OpenStack and Ceph Storage technologies.

Red Hat restructured its business organization and built a dedicated marketing function to drive internal and outbound awareness, promotion, product readiness, and sales enablement for its HCI solution.

Red Hat HCI should be considered predominantly for cloud, edge, ROBO and consolidated use cases for customers and providers adopting Red Hat Linux, Virtualization and cloud-based OpenStack deployments.

## Strengths

- Customers with Red Hat Linux and OpenShift initiatives now have an HCI offering to consider as part of the vendor's broader catalog.
- Red Hat's HCI is an alternative for existing Red Hat customers and new customers seeking a single-vendor, integrated experience for edge, ROBO, data center, hybrid and cloud infrastructure.
- Red Hat customers can leverage the company's extensive OS, virtualization, storage and cloud management toolset to manage HCI.

## Cautions

- Red Hat's usually strong support for Linux, virtualization and cloud offerings needs extending to HCI. Clients should get HCI references in their vertical and geographical markets for their specific use cases.
- Infrastructure and operations (I&O) leaders who have standardized on the hypervisor of a Red Hat competitor and have ELAs in place, and those that have a multihypervisor, multicloud strategy, will have difficulty justifying Red Hat alternate technologies. However, these should be based on a business case with proven implementations.
- Red Hat was late to market with HCI offerings and its feature set is more tied to other domains, not HCI. Clients should validate and mandate more-advanced HCI functions, such as storage and recovery.

## Scale Computing

Scale Computing, a global provider of hyperconverged infrastructure, was founded in 2007. Scale's offering, HC3, was introduced in 2012. The solution is delivered as a Scale-branded appliance and through OEMs to end users. It is available as software-only to managed service providers, and integrates its own KVM-based hypervisor, together with software-defined storage and networking, and web-based multicluster management. Scale drives leads through marketing its integrated hypervisor as an alternative to VMware, and HC3's hardware and

management efficiency, and its ability to serve the needs of locations with no on-premises IT support. Customers can acquire Scale's HC3 through resellers, server partners (Lenovo and American Power Conversion [APC]) and managed service providers. Over the past year, Scale has introduced its software-only offering for MSPs, HC3 Cloud Unity DRaaS (a fully managed service for disaster recovery running HC3 software on Google Compute Engine), and HC3 Edge, with centralized multicluster management. Until 2017, Scale was deployed primarily in data centers of midsize enterprises. Over the past 12 months, the vendor has been gaining traction in distributed enterprises, ROBOs and retail.

## Strengths

- In partnership with server vendors, Scale has significantly increased its ability to sell to and support customers outside the U.S.
- Scale provides a low-cost, feature-rich offering for distributed locations of large enterprises, while also serving the needs of midsize enterprises.
- The vendor offers consumption-based pricing for its Google Compute Engine DRaaS solution and for MSPs.

## Cautions

- Scale supports only its internally developed hypervisor, based on KVM. Scale is not an option for customers standardized on VMware ESXi or Microsoft Hyper-V.
- Scale's partner Lenovo offers multiple alternative solutions that compete directly with Scale, making differentiation difficult for customers.
- The preponderance of Scale's references are small and midsize enterprises. The company's limited marketing reduces visibility with C-level approvers in large enterprises with distributed locations.

## StarWind

StarWind, founded in 2008, is a developer of storage virtualization software that delivers HCI solutions targeted primarily at ROBO/edge and SMBs. It claims to be a "one-stop virtualization shop," providing full-stack data center infrastructure and delivering lower-cost, high-availability HCI solutions. Its HCI offering is the StarWind HyperConverged Appliance (HCA). The vendor also provides StarWind Virtual SAN (VSAN) HCI software, enabling hardware-agnostic offerings, and sells StarWind Virtual Tape Library (VTL), a backup appliance. With initial successes in education, government, healthcare, retail and transportation, StarWind has been trying to expand its global reach outside its headquarters in the U.S. Over the past year, StarWind has added more features and services, including ProActive Support (real-time



analytics for system monitoring). It also added hybrid cloud capabilities, including active-active synchronous clustering between on-premises and a wide range of public cloud services, such as AWS, Azure, Google Cloud and Oracle Cloud. Its system partners are Supermicro, Dell and Hypertec Group.

## Strengths

- StarWind offers low-cost HCI solutions (minimum one node), including some free services for installation and configuration. It offers ProActive Support and migration assistance. It also provides free not-for-resale licenses for students.
- Flexible storage configurations with multiprotocol software-defined storage stack and multihypervisor support allow customers to integrate existing infrastructures or with other HCI solutions.
- Customers like the high level of customization that StarWind provides.

## Cautions

- I&O leaders should note that StarWind may face growth challenges with larger competitors' increased focus on ROBO and edge requirements.
- StarWind needs to build brand awareness among large enterprises to make it easier for IT leaders to justify the selection of a lesser-known provider.
- Global support may be difficult given the vendor's limited partnerships with multinational system providers.

## StorMagic

StorMagic is a developer of storage virtualization software for use in storage servers and to deliver HCI solutions. StorMagic's SvSAN was introduced in 2008. The solution, delivered as software only, as part of other vendors' software-as-a-service offerings, or as an appliance through OEM and system integrator partners, leverages third-party hypervisors and integrates with their respective management consoles. StorMagic drives lead generation through targeted digital marketing and a presence at industry events, and by engaging with industry influencers and system integrators. StorMagic provides high-touch presales support and is available through reseller channels and server partners. Over the past year, SvSAN has enhanced performance with predictive storage caching and enhanced security capabilities with software-based encryption. While StorMagic has had success with small and midsize enterprises across a broad set of workloads, its primary focus is on the ROBO and edge requirements of larger enterprises.



## Strengths

- StorMagic has strong references for high-site-count deployments among global enterprise accounts in multiple geographic regions in partnership with leading system vendors.
- The vendor has consistently high ratings from customers for QoS and support.
- StorMagic's product provides low-cost, high-availability edge and ROBO deployments with minimal storage, CPU, memory, network infrastructure and network bandwidth requirements.

## Cautions

- The vendor lacks solutions for I&O leaders in large organizations seeking to standardize on a single technology for data center and ROBO deployments.
- StorMagic and its product SvSAN have limited market recognition and provide limited access to financial information, increasing the risk of objections from senior executives who must approve large purchases.
- I&O leaders at organizations with ELAs from VMware, Microsoft or Nutanix may have difficulty justifying the additional expenditure on SvSAN software.

## VMware

VMware is the industry-leading global server virtualization software company. VMware's HCI solution, which was launched in 2014, includes the ESXi hypervisor, vSAN storage virtualization, and vCenter Server for management. VMware leverages its software assets to deliver hyperconverged products that can be deployed on more than 500 certified x86 platforms, as vSAN Ready Nodes, Dell EMC VxRail, Hitachi Unified Compute Platform (UCP) and Lenovo ThinkAgile VX Series engineered appliances, or as a rack-scale solution. VMware Cloud Foundation (VCF) offers users a full-stack HCI experience, with a complete set of software-defined services for compute, storage, networking, security and cloud management. In addition, VMware Cloud on AWS is now starting to gain traction for end users looking for VCF as a service in the public cloud and to enable hybrid cloud workflows. New capabilities introduced in vSphere 6.7 focused on operational simplicity, greater efficiency, expanded application support and improved proactive support capabilities. VMware vSAN is deployed for a broad range of use cases across both midsize businesses and global enterprises for VDI, virtual server infrastructure, ROBO environments and Tier 1 applications. vSAN has grown notably since the introduction of Dell EMC's VxRail turnkey appliance in 2016, which solved a lot of initial difficulties of VMware vSAN hardware compatibility and integration.

## Strengths

- VMware offers the broadest implementation choices for HCI: as software only, reference architecture, a turnkey software appliance, a rack-scale software-defined data center solution or HClaaS on public cloud IaaS.
- IT leaders consider VMware to be one of the most trusted enterprise software technology providers.
- VMware has been consistently innovating and improving vSAN's software capability by focusing on improving performance, reliability, ease of operations and scalability of the solution.

## Cautions

- Some Gartner clients have reported an inconsistent quality of support experience, which is exacerbated by a lack of preventative maintenance, as well as analytics capabilities and advanced HCI troubleshooting and error-handling tools. VMware is beginning to address this by introducing some supportability improvements in the latest vSAN 6.7 release.
- Data reduction features such as deduplication, compression and erasure coding are not available as part of the standard edition or the hybrid configuration. Organizations requiring data reduction capabilities must license advanced or enterprise editions, and purchase all-flash hardware, raising the TCO of the solution.
- VMware HCI lacks advanced data services like data protection and file and object services, forcing end users to seek and integrate additional solutions.

## Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor's appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

### Added

Maxta, Red Hat, StarWind and StorMagic were added because they meet the Magic Quadrant's functional and business criteria, which were modified from the prior research.

### Dropped

HTBASE and Stratoscale were dropped because they no longer meet the Magic Quadrant's functional or business criteria, which were modified from the prior research.

# Inclusion and Exclusion Criteria

To qualify for inclusion in the HCI Magic Quadrant, vendors need to meet the following criteria.

## Functional Criteria

Included HCI vendors must:

- Provide an integrated software stack, which includes unified management, and software-defined compute, storage and, optionally, networking.
- Combine virtual machine and software-defined storage resources, both running on the same physical servers, as the primary deployment method.
- Virtualize local, internal and direct-attached storage, rather than shared, networked storage such as a SAN and/or NAS.
- Provide a mechanism to pool internal and direct-attached primary storage across servers into logical, abstracted virtual storage.
- Develop the storage and data management services integrated in the offering.

## Business Criteria

Eligible HCI vendors must:

- For each product to be evaluated, provide evidence of a minimum of 100 production customers brought to revenue in each of at least two of the major geographies (the Americas, EMEA, and the Asia/Pacific region and Japan) in the 12 months ending 30 June 30 2018.
- Deliver complete Level 1 (call center/service desk) and Level 2 (escalation) support either directly or through a contracted service provider to facilitate quick and easy problem resolution. However, Level 3 (engineering) support can be delivered separately based on vendors' engineering partnerships.
- Deliver solutions that meet user requirements in at least four of the uses cases identified in "Critical Capabilities for Hyperconverged Infrastructure."
- Deliver the product or products to be evaluated in the Critical Capabilities research in general availability by 30 June 2018.

# Honorable Mentions

Several vendors did not meet one or more of the inclusion criteria for this latest version of the HCI Magic Quadrant. However, they deserve honorable mentions and consideration by organizations seeking the benefits of HCI software.

## Datrium

Datrium is a U.S.-headquartered, venture-backed provider of hybrid-cloud infrastructure. Datrium competes directly against HCI suppliers, but its solution does not meet Gartner's functional definition of HCI.

## Fujitsu

Fujitsu is a global server and storage provider offering hyperconverged integrated systems based on HCI software from Microsoft, Nutanix and VMware.

## Hitachi Vantara

Hitachi Vantara is a global server and storage provider offering hyperconverged integrated systems based on HCI software from VMware.

## Lenovo

Lenovo is a global server, storage and networking provider offering hyperconverged integrated systems based on HCI software from Microsoft, Nutanix and VMware. Lenovo also has reference architectures with Maxta, Pivot3, Scale Computing, StorMagic, Stratoscale and others.

## NetApp

NetApp is a global provider of IT infrastructure and cloud management software. NetApp HCI competes directly against HCI suppliers, but its solution does not meet Gartner's functional definition of HCI.

## New H3C Group

New H3C Group is a China-headquartered supplier of IT solutions, including HCI, and the exclusive provider of HPE server and storage products in China. Its HCI products have been sold almost exclusively in the Asia/Pacific region.

## Riverbed

Riverbed is a U.S.-headquartered IT company providing network performance monitoring,

application performance management, edge computing, Wi-Fi and wide-area networks, including SD-WAN and WAN optimization. Riverbed's hyperconverged offering is predominantly applicable to ROBO use cases.

## Robin Systems

Robin Systems is a U.S.-headquartered, venture-funded provider of HCI for Kubernetes. ROBIN Hyper-Converged Kubernetes platform is used for containerized big data, and business-critical database and artificial intelligence (AI)/machine learning (ML) workloads.

## Sangfor Technologies

Sangfor Technologies is a provider of security, cloud and network optimization solutions based in China. Although the company is expanding geographically, Sangfor's HCI products have been sold almost exclusively in the Asia/Pacific region.

## ZeroStack

ZeroStack is a U.S.-headquartered, venture-funded provider of infrastructure software for on-premises private cloud and IaaS providers. ZeroStack's Intelligent Cloud Platform enables self-service provisioning and monitoring for multitenant, multicloud, and containerized environments.

# Evaluation Criteria

## Ability to Execute

Gartner analysts evaluate technology providers on the quality and efficacy of the processes, systems, methods and procedures that enable IT provider performance to be competitive, efficient and effective, and to positively impact revenue, retention and reputation. Ultimately, technology providers are judged on their ability and success in capitalizing on their vision.

**Product or Service:** Core goods and services offered by the technology provider that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the Market Definition/Description section and detailed in the subcriteria.

**Overall Viability:** Includes an assessment of the overall organization's financial health, and the financial and practical success of the business unit. This also includes the likelihood of the individual business unit to continue to invest in the product, continue offering the product and advancing the state of the art within the organization's portfolio of products. The growing proportion of startups in the industry require validation of business models and investment

risk.

**Sales Execution/Pricing:** The vendor’s capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

**Market Responsiveness/Record:** The ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor’s history of responsiveness. The dynamics in the market require increasing flexibility.

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the vendor’s message in order to influence the market, promote the brand and business, increase awareness of products, and establish positive identification with the product/brand and organization in buyers’ minds. This mind share can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on. Conservative buyers will consider references critical in this emerging market.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

**Table 1: Ability to Execute Evaluation Criteria**

Evaluation Criteria ↓	Weighting ↓
Product or Service	High
Overall Viability	High
Sales Execution/Pricing	Medium
Market Responsiveness/Record	High

Marketing Execution	Medium
Customer Experience	High
Operations	Low

Source: Gartner (November 2018)

## Completeness of Vision

Gartner analysts evaluate technology providers on their ability to convincingly articulate logical statements about current and future market direction, innovation, customer needs and competitive forces, and how well they map to the Gartner position. Ultimately, technology providers are rated on their understanding of how market forces can be exploited to create opportunity for the provider.

**Market Understanding:** The ability of the vendor to understand buyers' needs and translate these needs into products and services. Vendors that show the highest degree of vision will listen and understand buyers' wants and needs, and can shape or enhance those wants with their added vision. This is a relatively new market and continues to evolve.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization, externalized through the website, advertising, customer programs and positioning statements. The constant stream of new entrants puts pressure on positioning and the ability to differentiate.

**Sales Strategy:** The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** A vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature set as they map to current and future requirements. Strong strategy is required for product differentiation.

**Business Model:** The soundness and logic of a technology provider's underlying business proposition.

**Vertical/Industry Strategy:** The technology provider's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes. Emerging

technologies must be addressed and integrated.

**Geographic Strategy:** The vendor’s strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the “home” or native geography, either directly or through partners, channels and subsidiaries, as appropriate for that geography and market.

**Table 2: Completeness of Vision Evaluation Criteria**

Evaluation Criteria ↓	Weighting ↓
Market Understanding	High
Marketing Strategy	Medium
Sales Strategy	Medium
Offering (Product) Strategy	High
Business Model	Medium
Vertical/Industry Strategy	Medium
Innovation	High
Geographic Strategy	Medium

Source: Gartner (November 2018)

## Quadrant Descriptions

### Leaders

Leaders will typically be able to execute strongly across multiple geographies, verticals, use cases and deployment models. They will have a support and channel organization that ensures a high-quality customer experience regardless of whether the solution is purchased directly or through resellers, integration partners or OEMs.

### Challengers

Challengers are typically vendors whose achievements, while significant, are based on a narrower subset of the market, having gaps in geographic coverage, product portfolios and use cases. These vendors have the potential to establish themselves across the broader, global



market, but have not yet done so.

## **Visionaries**

Visionaries are typically vendors that are focusing on strong innovation and product differentiation, with the potential to significantly disrupt the market if execution improves. These may be smaller vendors with limited reach or achievement to date, or larger vendors with innovation programs that are still unproven.

## **Niche Players**

Niche Players are typically vendors with market programs focused on a limited set of geographies, deployment models, customer segments or use cases. These vendors have met the inclusion criteria and may address their specific market category effectively.

## **Context**

All hyperconverged integrated systems include HCI software, but HCI software is not limited to a system (hardware appliance) deployment model. Software-only/bring-your-own server, reference architectures, cloud and as-a-service deployments are growing, placing pressure on HCIS appliance vendors to consider software-only deployment options and to reduce hardware dependencies, offsetting the simplicity and agility compared with the HCIS appliance models. The advantages of software-only deployments, which include the avoidance of hardware vendor lock-in, are at least somewhat offset by the added complexity of the support model and inability of software-only vendors to test and certify the myriad configuration options customers may choose. Vendors with software-only options are expanding their OEM partnerships and server certifications to provide greater choice and an improved support experience.

One limitation of the traditional HCIS appliance model is that compute, storage and networking do not scale in tandem for all workloads. To compete across the broadest range of workloads, more vendors are offering compute-only and storage-only nodes. Because resource and performance requirements vary substantially by workload, Gartner continues to recommend that I&O leaders conduct a POC to evaluate the compute, storage and networking requirements of their workloads running on HCI. I&O leaders also should estimate the component growth requirements to determine the need for asymmetrical scaling. The POC should include a careful analysis of performance during node failures, the increase in risk during node failures and the time to recover from node failures.

Although there are multiple 100-node-plus deployments today, most HCI implementations can be measured in tens of nodes or fewer. Even large deployments tend to be segmented into

smaller clusters, but with centralized management across clusters. As HCI becomes more broadly adopted across a broader range of nonhomogeneous workloads, requirements will increase for HCI to operate more autonomously, including the capability to automatically provision, rebalance, adapt to meet QoS requirements, detect anomalies, and prevent failures and data loss. When HCI is deployed at large scale, these capabilities will be both increasingly necessary and key points of vendor differentiation.

One of the attractions of integrated systems and HCI is the potential to create a cloudlike provisioning model while maintaining physical control of IT assets and data on-premises in the data center, remote site or branch office. Over the next few years, cloud deployment models will become increasingly important to meet both short-term scale-up/scale-down requirements and backup and disaster-recovery requirements. An important question for users is whether HCI is a stepping stone to the cloud or a “foreseeable future” resting place for applications and finally a good alternative to the public cloud from performance, manageability at scale and cost perspectives.

The adoption of HCI-based solutions continues to grow but, outside of smaller organizations, HCI is unlikely to become a full-service platform for IT services across all workloads. I&O leaders should evaluate HCI solutions and select vendors and products not because HCI or that vendor is rapidly growing, but because it fits their particular use case, growth expectations and application-architecture direction. HCI is likely to become yet another silo to manage, so integration with higher-level management frameworks (including cloud, container and security management) becomes key to supporting an already overtaxed operations staff.

Adopting technology innovation must be business-led, not technology-driven. There is no ideal integrated system or “endgame” infrastructure. New hardware and software innovations will continue to appear, moving the goalposts and pushing the boundaries of infrastructure design and delivery. Consolidation, rationalization and virtualization set the foundation for ultimately delivering hyperconverged, SDI and composable integrated systems (see “The Road to Intelligent Infrastructure and Beyond”).

## Market Overview

HCI is a market that has significant overlap with the hyperconverged integrated system submarket of integrated systems. The two, however, cannot be equated, as HCI includes flexible deployment and sourcing models that extend to cloud, on-premises-as-a-service, bring-your-own-hardware, reference architectures, and OEM or branded appliances. At one extreme, vendors that offer multiple HCIS solutions may not develop any of their own HCI software. Conversely, HCI software vendors may partner with multiple hardware, software and cloud providers to deliver their solutions to market.

As HCI vendors expand their deployment options to include more cloud providers, such as Amazon, Google and Microsoft, acquisition activity increasingly is focused on tools and capabilities to monitor, secure, manage, optimize and govern diverse on-premises and cloud deployments.

Many partners in the HCI market are also competitors, and I&O leaders must remain cognizant of the sometimes conflicting priorities and incentives of HCI vendors and their partners. Full-stack infrastructure software suppliers, such as Microsoft, VMware and Red Hat, pose interesting partnership challenges, as each could ultimately own the lion's share of HCI opportunities within their substantial installed base of customers. Vendors that have more hypervisor-neutral – or at least hypervisor-flexible – offerings may have advantages for customers that want to avoid hypervisor lock-in. I&O leaders pursuing multihypervisor strategies should carefully evaluate the ability of solution providers to deliver simplicity at the management layer. Cloud providers Amazon and Google, together with Microsoft, which has already has a substantial position, could ultimately disrupt the entire HCI market if they further extend their cloud offerings to on-premises infrastructure. Meanwhile, I&O leaders will have an alternative to public cloud and private data centers by leveraging IaaS providers that use simpler-to-manage HCI for their own infrastructure.

## Evidence

This Magic Quadrant is based on vendors' written responses to an extensive Gartner survey, vendor presentations, reference customer surveys, Gartner interviews with vendor partners and competitors, Gartner client inquiries, and independent validation of vendor claims through assessment of third-party resources.

In addition, analysis of social media conversations regarding HCI revealed that while “hybrid cloud enablement” was the primary conversation driver in prior years, the market direction is now gradually shifting toward enabling edge environments, AI-based operations and secondary storage in HCI environments. Also, encryption has appeared for the first time among the top 10 HCI conversations, and discussions regarding composable infrastructure in the context of HCI have declined:

- **Source of social media analytics data:** Automated social media listening tools were used to track user responses on social media and public discussion forums as a leading indicator for consumer sentiment, preferences and activities:
  - The data tracked is specific to quantifiable keywords and phrases, as well as qualitative assessments and evaluations of results and use cases.

- **Duration of the research:** The time period for the analysis of the overall mention count was considered between 1 January 2016 through 30 September 2018. Considering a different time interval may change the most talked-about conversations.
- **Definition of “mentions”:** “Mentions” are the text inclusion of a monitored keyword in a post on a social media platform. A high mention count should *not* be interpreted as “positive” sentiment by default.
- **Sources covered:** By default, social media sources considered for analysis include Twitter, Facebook (publicly available information only), aggregator websites, blogs, news, mainstream media, forums and videos (comments only); unless and until specified.
- **Market direction frequency and ranks:** User responses from social media were cleaned and tokenized using Python libraries and were represented in the form of n-grams. They were sorted based on the number of times they appeared in the conversation universe. The topmost n-grams were represented:
  - Frequency is a representation of the number of times a word appears in a dataset. There could be multiple counts of the same keyword in a single social media post.
- **Geography covered:** All geographical regions of the world were analyzed for the study.
- **Languages used:** All languages recognized by the tool were used for the study.
- **The Social Media Analytics team:** Members who contributed to this research include Ayush Saxena and Arnav Saxena.

## Evaluation Criteria Definitions

### Ability to Execute

**Product/Service:** Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

**Overall Viability:** Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

**Sales Execution/Pricing:** The vendor's capabilities in all presales activities and the structure

that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

**Market Responsiveness/Record:** Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

## Completeness of Vision

**Market Understanding:** Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

**Sales Strategy:** The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** The vendor's approach to product development and delivery that

emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

**Business Model:** The soundness and logic of the vendor's underlying business proposition.

**Vertical/Industry Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

**Geographic Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

© 2018 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner is a registered trademark of Gartner, Inc. and its affiliates. This publication may not be reproduced or distributed in any form without Gartner's prior written permission. It consists of the opinions of Gartner's research organization, which should not be construed as statements of fact. While the information contained in this publication has been obtained from sources believed to be reliable, Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information. Although Gartner research may address legal and financial issues, Gartner does not provide legal or investment advice and its research should not be construed or used as such. Your access and use of this publication are governed by [Gartner's Usage Policy](#). Gartner prides itself on its reputation for independence and objectivity. Its research is produced independently by its research organization without input or influence from any third party. For further information, see "[Guiding Principles on Independence and Objectivity](#)."

[About](#) [Careers](#) [Newsroom](#) [Policies](#) [Site Index](#) [IT Glossary](#) [Gartner Blog](#)  
[Network](#) [Contact](#) [Send Feedback](#)

Gartner.

© 2018 Gartner, Inc. and/or its Affiliates. All Rights Reserved.