



# Gain Agility, Scalability, and IT Capacity Without New Infrastructure Investment

**Managed private cloud solutions provide interoperable, secure, on-demand cloud infrastructure and services**

“85% have implemented or plan to implement private cloud, and organizations plan to increase private cloud spending by 40% over the next two years.”<sup>2</sup>

IDC, 2016

## Industry Strategic Challenges

To keep up with business needs and stay competitive in an increasingly technology-enabled marketplace, today's companies need to be more agile than ever. The pressure is on IT to deliver rapid response and prepare for ever-more intensive compute and storage needs, while holding the line on costs. But they are often held back by outdated, purpose-built infrastructure, overburdened resources, and a growing gap in essential skills to implement new services—all of which slow innovation and time to market. Outdated environments are expensive to maintain and they keep organizations locked in to specific vendors, limiting flexibility, scalability, and maximum return on technology investments. Security and compliance are also major concerns.

Businesses are increasingly turning to cloud solutions. Cloud technology has matured and adoption is sharply on the rise across industries. And respondents to the 2017 Intel Security survey on the current state of cloud adoption thought their IT budgets would be 80 percent cloud-based in just 15 months, on average.<sup>1</sup>

Selecting the best cloud solution—public, private, or hybrid—involves careful consideration of how each cloud implementation option would meet the needs of the overall organization and its specific workloads, with three key areas of consideration:

- **Business considerations:** Use cases; time to market; agility; legal and regulatory concerns; finance strategies including TCO and CapEx vs. OpEx tradeoffs; billing models; demand profile; scale of service; business continuity and disaster recovery; and geographic location of both users and data centers
- **Technical considerations:** Performance to meet workload demands and SLAs for application developers and end users, including specialized compute requirements and large datasets; existing applications' cloud-readiness and compatibility; security; integration; and licensing
- **Ecosystem considerations:** Evaluation of cloud service providers and service models, including Software as a service (SaaS), Platform as a service (PaaS), or Infrastructure as a service (IaaS)

Many companies find that private clouds are best suited to their needs, delivering more cost-effective capacity, flexibility, and scalability than the organization's legacy systems, while offering the security level their specific industry or business might need. In fact, a 2016 IDC report found that “85% of respondents have implemented or plan to implement private cloud, and organizations plan to increase private cloud spending by 40 percent over the next two years.”<sup>2</sup>

Private cloud solutions serve a single organization, providing isolated data protection, which is especially important for industries with stringent security and compliance requirements, like financial services and healthcare. Private clouds can

be deployed on-premises (enterprise private cloud) or off-premises (virtual private cloud) and they can be managed by the organization (DIY) or a third-party cloud service provider (fully managed).

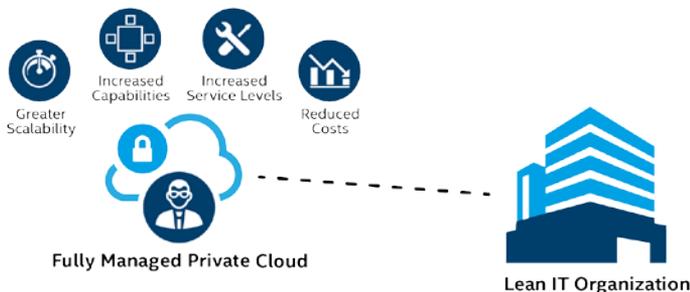
These “fully managed” private clouds can free up or extend the organization’s IT resources, offering a wider range of solutions and services on demand. This is especially valuable for lean IT operations.

Intel and its broad ecosystem of solution providers can help organizations get started by evaluating whether a managed private cloud is the best cloud strategy for their workloads—and then implementing successful Intel® technology-based clouds, with security built in to every infrastructure component.

## Business Drivers and Desired Outcomes

- Reduce costs for purchase and maintenance of purpose-built traditional infrastructure
- Enable scalability to keep pace with current business and innovation demands
- Increase agility through interoperability and vendor choice
- Decrease time to market with faster, more reliable development lifecycles
- Meet security and compliance needs

## Fully Managed Private Cloud



With fully managed private cloud services, businesses gain faster access to more solutions.

## Digital Transformation and Business Innovation

Private cloud solutions allow businesses to take advantage of modern cloud computing benefits, while maintaining higher level of control over their applications and data. Managed private clouds can transform IT operations in several ways, delivering resiliency and scalability the organization would not be able to achieve without replacing older infrastructure. With a cloud service provider handling infrastructure deployment and management, IT can focus on improving



responsiveness and SLAs, enabling shorter innovation cycles, time to market, and competitive advantage. And service provider expertise can provide a skill pool that organizations with limited IT resources may not have.

## Enabling Transformation

Intel is working with industry partners to expand the options for cloud infrastructure and the benefits of cloud solutions, including managed private clouds. In addition, Intel® technologies are the foundation of software-defined infrastructure (SDI) solutions across platforms, from leading vendors and open source. SDI and cloud technologies work hand in hand to build agile enterprises and enable cloud innovation.

## Solution Summary

Private clouds enable single-tenant network access to a shared pool of computing resources—including virtual networks, servers, storage, applications, and services. These resources rapidly scale organizational capacity up or down on demand and can be provisioned and released with minimal IT management. Fully managed private clouds are implemented and managed by a service provider, with cloud infrastructure software managed via dashboard or open APIs. Cloud-based software, powered by Intel® technology, improves security, compliance, and performance, while increasing availability.

## Solution Ingredients

- Cloud-based software
- Private cloud solution providers with fully managed services, including IBM, Cisco, Rackspace
- Intel® technology:
  - **Stronger security:** Intel® Trusted Execution Technology (Intel® TXT) provides cloud operators with automated security and compliance monitoring. Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) accelerates encryption and decryption. Intel® Secure Key and McAfee reduce vulnerability to sophisticated cyberattacks.
  - **Higher performance:** Intel® Xeon® processor family, Intel® Solid State Drives (Intel® SSD), and Intel® Ethernet Gigabit Server Adapters (Intel® EGSA) deliver reliable, high-performance network, compute, and storage capabilities for virtualized environments.

## Where to Get More Information

Please visit [Intel.com/cloud](http://Intel.com/cloud).

**Optimal Workload Placement for Public, Hybrid, and Private Clouds** <http://www.intel.com/content/dam/www/public/us/en/documents/white-papers/optimal-workload-placement-for-public-hybrid-and-private-clouds-white-paper.pdf>

<sup>1</sup> “Blue Skies Ahead? The state of cloud adoption,” Intel Security, 2017: <https://www.mcafee.com/us/solutions/lp/cloud-security-report.html>. Press release: <https://newsroom.intel.com/news-releases/intel-security-cloud-report-reveals-it-departments-find-hard-keep-cloud-safe/>

<sup>2</sup> “Cloud Going Mainstream: All Are Trying, Some Are Benefiting; Few Are Maximizing Value,” IDC White Paper, Sponsored by Cisco, September 2016 <http://www.cisco.com/c/dam/en/us/solutions/collateral/trends/cloud/cisco-bca-white-paper.pdf>

Intel technologies’ features and benefits depend on system configuration and may require enabled hardware, software, or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer, or learn more at [intel.com](http://intel.com).

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