

## Solution Showcase

# IBM Introduces Compute as a Service

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**Abstract:** The cloud revolutionized IT, but public clouds aren't ideal for all workloads. The future is hybrid. On-premises infrastructure must harness cloud services' agility to enable modern business. To achieve this goal, IBM is bringing its cloud compute experience to the data center with managed, on-premises compute as a service.

## Overview

A modern business is only as competitive as its digital services. ESG research shows that when businesses identify their goals for digital transformation, some are transforming to provide a better, more differentiated customer experience (43%). Some hope to develop data-centric and/or innovative products and services (a combined 75%). And others are proceeding with digital transformation initiatives in the hope of developing an entirely new business model (30%).<sup>1</sup>

A driving force behind these efforts involves the development of modern, often cloud-native, workloads. For example, ESG research on application development spending reveals that 31% of surveyed organizations intend to devote significant funding to implementing a formal DevOps practice.<sup>2</sup> While the term "cloud-native" implies "public cloud only," that's not the case. Performance, privacy, and compliance requirements continue to keep workloads onsite, as some factors, including being too critical to the business, can make workloads difficult to move. Among surveyed IT organizations that had repatriated workloads from the public cloud to be run on-premises, 49% pulled back at least one cloud-native workload. Thus, the hybrid cloud is now the standard for IT, with on-prem infrastructure continuing to play a major role—56% of IT organizations surveyed in 2018 expected to still run more than half of their production workloads on-premises in the following three years.<sup>3</sup>

As business becomes dependent upon modern cloud-native applications for success, IT must expedite app service delivery by providing a cloud-like experience onsite. To support them, [IBM](#) is expanding its IT-as-a-service offerings for the data center, with a managed on-prem compute as a service offering to help transform and expedite IT operations. It should free up personnel from worrying about infrastructure details, so they can focus on improving the business.

## Modern IT Challenges

Of course, traditional requirements haven't disappeared. Data security continues to be a concern for everyone. IT service availability and resiliency remain vital. Business teams, however, now expect even more. Only 6% of line-of-business executives ESG surveyed regard IT as a competitive differentiator, while a disconcerting 25% view it as a business inhibitor. Those viewing IT as an inhibitor say it is because IT processes are taking too long (43%), and/or that it has been too difficult

<sup>1</sup> Source: ESG Research Report, [2019 Technology Spending Intentions Survey](#), February 2019.

<sup>2</sup> Source: ESG Master Survey Results, [2019 Technology Spending Intentions Survey](#), March 2019.

<sup>3</sup> Source: ESG Master Survey Results, [Tipping Point: Striking the Hybrid Cloud Balance](#), October 2018.

to access the data they need to do their jobs (43%).<sup>4</sup> As their demands increase, IT becomes more complex. In fact, 66% of surveyed IT decision makers tell ESG that IT is more complex than it was just two years ago.<sup>5</sup>

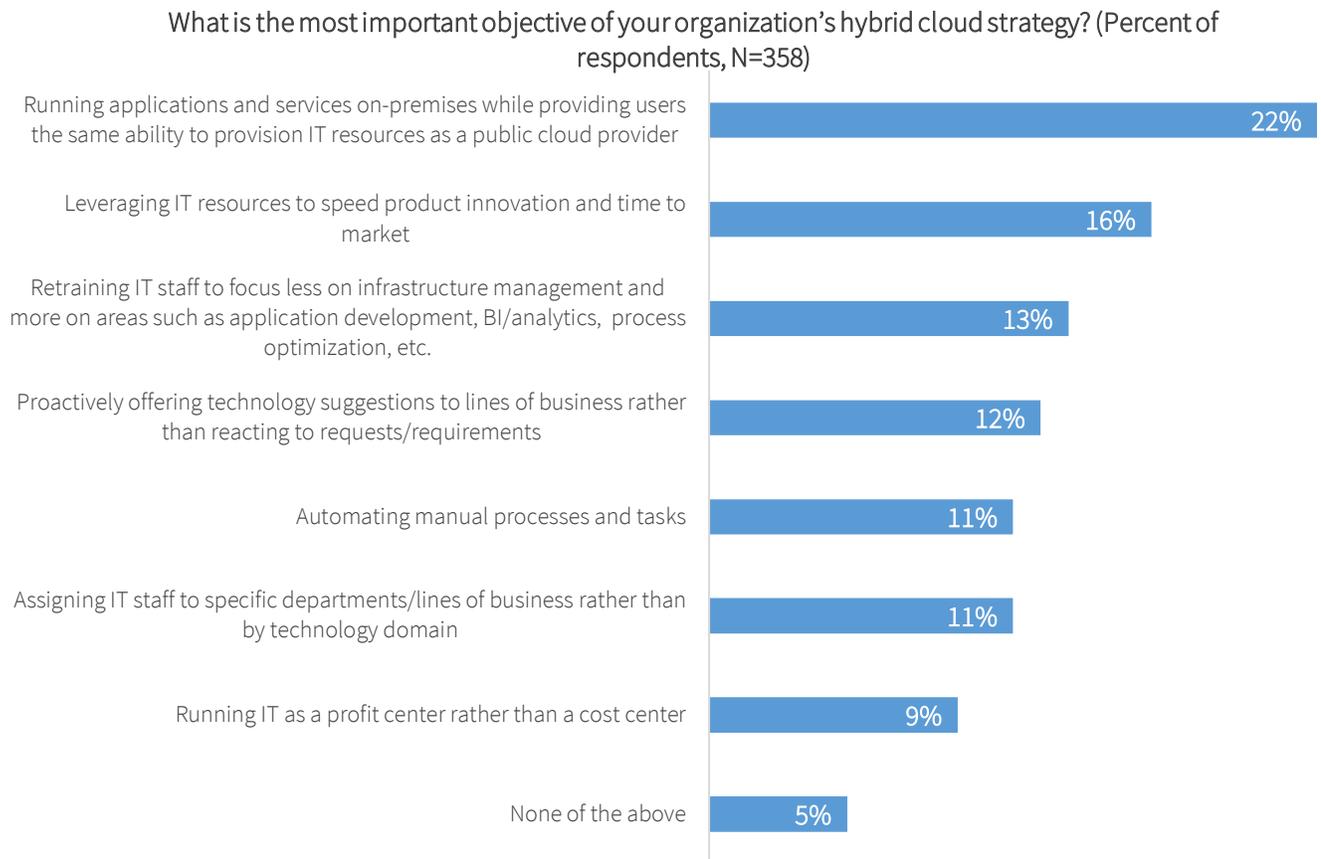
### Modern, Cloud-native Application Development Increases the Pressure

IT must deliver infrastructure services faster and more efficiently. Today, IT service delays are business delays. It’s partly why 21% of organizations surveyed by ESG say that increasing infrastructure capacity supporting application development is one of their most significant app-dev investment areas, and 17% identify increasing the use of containers as a significant app-dev investment area.<sup>6</sup> But adoption of such modern workloads increases complexity: 29% of respondents who are seeing increased IT complexity say the increase in the number and type of applications is a key factor.<sup>7</sup>

### The Need for an On-prem Cloud Experience

IT needs to change. Fortunately, hybrid clouds will let them recreate a public cloud experience *on-premises*. As Figure 1 shows, expediting IT service delivery to empower the business could be the result.<sup>8</sup> For example, 22% of IT decision makers want to provide end-users with the same ability to provision IT resources on-premises that they can get from a public cloud provider; 16% want to leverage IT to speed innovation, and 12% want to be more proactive responding to the business.

**Figure 1. The Most Important Objective of Hybrid Cloud Strategy**



Source: Enterprise Strategy Group

<sup>4</sup> Source: ESG Master Survey Results, [2019 Technology Spending Intentions Survey](#), March 2019.

<sup>5</sup> *ibid.*

<sup>6</sup> Source: ESG Brief, [2018 Application Development Spending Priorities](#), February 2018.

<sup>7</sup> Source: ESG Master Survey Results, [2019 Technology Spending Intentions Survey](#), March 2019.

<sup>8</sup> Source: ESG Master Survey Results, [Tipping Point: Striking the Hybrid Cloud Balance](#), October 2018.

Clearly, the potential for opportunity creation is not lost on IT decision makers—13% are looking to enable staff to focus on higher-value activities such as working with other lines of business and developers to improve or accelerate modern app development.

### Talent Shortages Exacerbate IT Complexity

IT complexity becomes more problematic when skilled people are scarce. A recent ESG study found IT architecture and planning is the second most commonly identified IT skill shortage (38%), behind only cybersecurity.<sup>9</sup> As organizations kick off or scale up digital business initiatives, searching for the right IT personnel holds them back. This challenge can be even more acute at large global firms that are trying to hire talent *and* standardize practices across regions.

### IBM Managed Private Cloud IaaS for x86 Compute

IBM, a leader in the IT industry, is expanding its managed cloud services portfolio with Managed Private Cloud IaaS for x86 Compute. Built from a converged infrastructure architecture leveraging Cisco UCS x86 technology, it is a fully managed compute as a service solution, billed using an OpEx-based consumption model.

IBM offers multiple ways to consume the offering, including bare metal or as a virtual instance.

Organizations can add services, too, such as cloud management, container orchestration, and application orchestration. Examples include the Kubernetes-based Red Hat OpenShift Container Platform and the Ansible open source automation platform.

Companies can leverage RedHat OpenShift to build a containerized platform to speed application development and deployment. In addition, this platform enables a homogeneous interface to resources and deployment targets for public and private cloud workloads. RedHat OpenShift is open, so it reduces concerns about vendor lock-in and provides portability across multi-cloud environments. Managed Private Cloud IaaS offers an excellent foundation for RedHat OpenShift to drive a hybrid cloud strategy.

VMware environments for a private cloud can be managed leveraging capabilities from IBM service offerings. The Managed Private Cloud IaaS can be the foundation for a VMware environment that includes a management of the VMware virtualization infrastructure, full VM lifecycle management, and delivery with certified skills from IBM.

Companies can also combine this compute-as-a service solution with IBM's managed storage as a service offering, Managed Private Cloud IaaS for Storage, to deliver a fully managed on-premises infrastructure as a service solution.

Happily, this solution comes with very little fine print. IBM does require minimums in server counts, a minimum percentage consumption of peak usage, and a short minimum contract term. But there are no growth commitments, and the contract term is about the same as a standard server generation.

### IBM Managed Private Cloud IaaS for x86 Compute

This is a fully managed compute as a service solution. IBM includes:

- Hardware and software, including interconnect.
- Hypervisor software.
- Installation, management, and monitoring.
- 24x7x365 operation.
- Solution security.
- Integration with ticketing.
- Enablement for automation/orchestration.
- A client-facing portal.

<sup>9</sup> Source: ESG Master Survey Results, [2019 Technology Spending Intentions Survey](#), March 2019.

## IBM Managed Private Cloud IaaS for x86 Compute Transforms IT

IBM managed compute as a service enables businesses and IT organizations to extricate themselves from time-consuming, low-value, IT infrastructure deployment, management, and maintenance activities.

### Predictable, Transparent, and Secure

Often, implementing a new compute infrastructure is a custom, labor-intensive process. Many IT cycles are spent on application sizing, hardware procurement, power/cooling sizing, deployment, and management. Each of those activities consumes valuable time that should be used instead to enable the business.

And how does the IT organization know it is getting the best price? The IBM offering comes with a cloud-like, cancel-any-time-after-a-brief-time-period arrangement with no growth commitments. The solution can also scale up/down on demand. (IT organizations spend too much time forecasting demand fluctuations.) The solution is a secure, encrypted cloud experience with air-gapped management. Overall, this offering could reduce risks associated with IT compute infrastructure and streamline the entire process, making it predictable, transparent, and secure.

### Expedited, Dynamic, and Optimized

Modern, cloud-native applications demand a dynamic compute infrastructure environment. The need to spin up thousands of microservices cannot be delayed so that new hardware can be sized, scoped, priced, ordered, and deployed. Such delays defeat the purpose of moving to containers in the first place, especially at a time when container adoption is strong. Among IT organizations that report running containers, an average 22% of their production workloads run in containers.<sup>10</sup>

With traditional on-premises deployments, there are certain unavoidable complexities, such as sizing for power and cooling, or dealing with internal bureaucracy. They may be necessary but add little value. IBM keeps excess compute on hand to handle scale immediately, a crucial capability when maximizing the value of container-based application environments is the goal. Price varies per usage, so costs stay optimized for *only* what is in use. IBM also leverages best practices to ensure environments are optimized for each application, including modern, cloud-native, container-based environments.

### Transformative and Global

For a global business, achieving digital transformation goals is simultaneously important and complex. The size, scale, and scope of large business increases the opportunity associated with digital initiatives, while increasing the risks and costs associated with not pursuing them (or stumbling during their execution).

IBM's compute as a service offering is available at a global level, across numerous countries and multiple continents. This level of scale delivers vital IT agility and time-saving benefits, providing those benefits on a consistent, predictable basis for multiple sites globally. And IBM has a long history of success in global IT infrastructure and service delivery. Large businesses will achieve a consistent infrastructure, management, and application environment worldwide. IBM also addresses the scarcity of quality IT personnel across the globe by supplying its own expertise, allowing enterprises to focus on creating business value.

## The Bigger Truth

IBM is presenting businesses with an incredible opportunity. What is the best use of a company's in-house IT talent? Is it to rack and stack servers, calculate power and cooling demands, track processor and memory innovations, and stay up to speed with all the infrastructure nuances of different application environments? Or is it to focus on leveraging modern,

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<sup>10</sup> Source: ESG Research, *2019 Trends in Container-based Application Environments*, to be published.

next-gen workloads to transform the business competitively, where IT becomes no longer an inhibitor but a competitive differentiator?

Managed Private Cloud IaaS for x86 Compute from IBM is designed to securely solve the time-consuming minutia of IT, so businesses can invest their people in growing the business.

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