

White Paper

**IBM® Cloud Pak®  
Establishes Next  
Generation Solutions  
For Data Centers**

Platinum  
Business  
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### The Modern Data Center: A Moving Target

Long withstanding constant changes in the market, the data center has continuously adapted in the face of evolving industry to remain the central fixture around which enterprise IT revolves. Today the data center is again pressed to adapt to new market changes in order to keep up with businesses' needs for new levels of business automation and data modernization.

To that end, the vision of the modern data center has become less about its physical characteristics and more about its very idea: a center that takes a hybrid model, encompassing on-premises data centers, cloud data centers, co-location facilities, and more. In this vision, modern data centers must be dynamic, distributed, integrated constructs that combine a number of different technologies to create a single environment. Only with this flexible design will data centers be able to manage and rapidly deploy business services and their associated workloads to the locations where they're needed to fulfill rigorous market demands.

Businesses are increasingly turning their focus to modern data center performance and automation, as the pressures for digital transformation continue to become more intense. With rapidly changing markets and growing customer demands, yesterday's infrastructures have been stretched to their limit, and businesses who rest with old technology simply can't keep up, leaving them to search for new ways to achieve greater efficiency, agility, and capability.

Many are finding that the way is with modern data centers and automation.

With new IT infrastructures at the helm of their business, organizations will be able to deploy services and workloads wherever and whenever, empowering them to keep up with demands, meet customer expectations, and, ultimately, retain a competitive edge in the market.





## Current Challenges for Data Center Performance and Business Automation

While savvy businesses have realized they need to rethink their IT infrastructure to put the focus on modern data center performance and automation, they're being confronted with certain challenges along the way to this digital transformation.

In order to achieve a seamless hybrid cloud modernization of data centers, they must find ways to overcome the following challenges:

### Changing Markets

There's pressure in the market for IT organizations to become less technology defined and more services defined. This is, indeed, a goal for many organizations, as well as a key factor in building modern data centers.

While yesterday's data centers were seen primarily as a delivery vehicle for some class of technology, modern data centers, on the other hand, are tasked with becoming deft enablers of the deployment of services and workloads, wherever and whenever. Further adding to the pressure of this data center modernization is the demand to do it both fast and at a low cost.

But achieving comprehensive data center modernization for improved performance and business automation is a big undertaking, and it's often not feasible and/or desirable to hire in-house the diverse skill sets needed to design, deploy, integrate, train, and service the many different technologies that are involved in creating modern data centers.

The goal is clear: Organizations must pivot their infrastructure models to enable better data performance and business automation; failure to do so means falling behind market competitors. The challenge remains, then, as to how to make this transition.

### Broadening Customer Expectations

In an always-on world, customers expect resiliency and reliability at all times, and organizations are well aware that failure to provide continuous operations risks destabilizing customer

confidence. Even as customer workloads become more challenging and more data-intensive, businesses must create data centers that remain resilient and are able to guarantee the availability of hosted data under all circumstances.

Businesses, however, have more to contend with than just the challenge of continuous operations. As they provide reliability for customers' increasing workloads, businesses must also keep pace with providing sufficient security as well—and with more workloads, too, comes more uncertainty for security. This challenge to meet customers' expectations for security is further compounded by having critical workloads spread across multiple environments in the hybrid cloud.

Nonetheless, in order to satisfy customers' broadening expectations and retain their competitiveness in the market, businesses must find resolutions to resiliency, reliability, and security challenges.

### Decreased Time to Market

Businesses are well cognizant of the tough expectations put forth by customers, and they're equally cognizant of the fact that they have little time in which to deliver on these expectations. The market may be mounting more and more intense pressure for accelerated innovation and decreased time to market, but organizations must take heed that speed cannot be won at the price of security.



To meet these challenges to speed up time to market, businesses are realizing that they must undergo a significant digital transformation, but challenges remain in effectuating hybrid cloud modernization of data centers and business automation.

In today's market, organizations must transition to new environments in which they can quickly build new cloud-native applications, modernize existing applications, and extend AI capabilities consistently across multiple clouds; however, transitioning to this new environment, while advantageous, is tricky and is simply not feasible for most organizations to take on with their in-house teams. Instead, businesses must find new solutions and partners who can help them achieve this swift transformation—and in time to keep up with market demands and beat the challenge of an ever-decreasing time to market.

#### Accelerated Innovation

Meeting the demanding needs of the market and customers comes with the challenge of determining how to accelerate innovation with a renewed focus on scalability and sustainability. Today any conversation about data center modernization must include scalability and sustainability as key drivers of data center design.

Of particular concern is the new challenge to reduce the footprint of the data center. Businesses must consider that supporting old hardware and infrastructure is not only cumbersome but also unsustainable. For example, trying to support today's operations on yesterday's infrastructure means adding more equipment and, ultimately, expending more energy to run and cool these systems; it's neither efficient nor scalable nor sustainable.

In addition to considering security, resiliency, reliability, and decreased time to market, modern data center

performance and business automation must also include finding ways to achieve new energy efficiencies. Organizations should well take note, as sustainability is increasingly a front-of-mind concern for today's customers. This is a true challenge, however, as modern data centers must be scalable to keep pace with new technologies while also finding methods to optimize energy consumption. If done correctly, though, organizations will be able to realize new cost savings and leaner business operations alongside sustainability benefits.

#### Improved Operational Efficiency

Growing business means managing the production, capture, analysis, and sharing of more and more data from more and more sources. With this comes the ongoing challenge of needing to scale workloads that are able to process all of this data, and enterprises are quickly finding that yesterday's data centers are not fit for the job.

Legacy infrastructures not only stunt business growth but also inhibit organizations from becoming competitive players in the modern market. If enterprises are going to meet the challenge of achieving improved operational efficiency, they must turn their attention to new methods of business automation and the hybrid cloud modernization of data centers.



### Available Solutions for Data Center Performance and Automation

With yesterday's infrastructure being stretched thin in attempts to support today's intensive demands, organizations are considering new strategies and solutions for data center performance and automation.

Modern data center solutions are no longer tied to a physical location but are integrated into the very fabric of an organization. While there are many options for how a data center can be designed to achieve various levels of service for managing and monitoring different environments, new solutions for data center performance focus on hybrid strategies in which business applications, workloads, and data reside in several locations. For example, more modern data centers can feature hybrid cloud on-premises platforms or integrate on-premises components with solutions in multiple clouds.

In theory, these available solutions should support high levels of data center performance and automation by offering ways to quickly expand and contract compute and storage capacity as needed, on demand, but these types of solutions often remain hardware-centric and hardware-specific in the way that IT teams manage them. For example, with these solutions, expanding performance for compute power, storage, or networking would often necessitate adding new equipment.

To better facilitate improved data center performance and automation, organizations are also leveraging hybrid cloud technologies for data development and management. But in the scope of these still very hardware-centric data centers, these efforts have also caused the rise of shadow IT, in which business units seek external sources for purchasing and deploying technology (often through hosting and SaaS providers) without first consulting IT teams on potential integration issues.

These available solutions and means of operation have, in part, contributed to the ongoing evolution of the idea of what a data center is and does. But if organizations want to realize seamless hybrid cloud modernization of data centers, they'll need to find new ways to manage these siloed departments and improve efficiency for data center performance and automation.



### Cloud Paks: Why the Logicalis + IBM® Solution Matters

To help drive the data modernization that businesses need to support automation and realize true digital transformation, IBM® has created IBM Cloud Pak® solutions, pre-certified, containerized software and foundational services that businesses can run anywhere to accelerate their transformation with new levels of agility and flexibility.

### Plug-and-Play Containers for Application Integration and Modernization

With pre-certified, pre-integrated software, Cloud Paks empower enterprises to take advantage of a cohesive plug-and-play platform, eliminating the need to enlist a retinue of developers and data scientists to achieve innovation. Instead, with Cloud Paks, enterprises can empower the teams they already have in-house with

IBM's deep industry and technical expertise to both simplify and accelerate development for a faster time-to-value.

Having this cohesive platform throughout also allows enterprises to integrate security across their entire IT estate, so they're secured from the ground up to ensure a stronger security posture.

Cloud Paks was built on Red Hat® OpenShift® to help businesses build, modernize, and manage applications securely across any cloud. Meanwhile, container and Kubernetes technology support application integration and modernization by enabling enterprises to run applications anywhere—from on-premises to all clouds to the edge.

### AI-Powered for Predictable, Optimized Business Processes

With Cloud Paks, all functionality can be effortlessly managed by a single intelligent control plane. From here, enterprises can connect, move, and manage applications and workloads across fragmented environments, getting a consistent experience for infrastructure management for AI, automation, and security. Having a single source from which all applications and workloads can be managed enables businesses to remove silos, empowering them to focus on growth and innovation, so they can accelerate their digital transformation.

By providing a common operations and integration framework from which businesses can leverage an intelligent, AI-powered control plane, Cloud Paks helps businesses deliver software and insights faster. Cloud Paks also facilitates the implementation of AI-driven workflows, so businesses can automate integrations at scale to improve productivity and quality of outcomes. Finally, by being able to collect, organize, and analyze data no matter its type or location, enterprises are further empowered by Cloud Paks to better predict outcomes and optimize business processes.





### A Full Range of Solutions for Data Center Needs

As a joint solutions provider for business automation and data modernization, Logicalis + IBM bring together the best of both worlds for business automation and data center needs.

With cloud strategy recognized as a key component in successful digital transformation, IBM Cloud Pak is delivering the industry's only hybrid cloud platform experience to enable businesses and IT teams to build, modernize, and manage applications across any cloud or IT infrastructure.

Working with Logicalis, you can implement Cloud Paks solutions to unify cloud storage, deliver actionable insights, automate integrations, and gain enhanced security for your business.

To start establishing next-generation solutions for your data center with Logicalis + IBM, sign up for a demo or book a meeting to learn more at <https://www.us.logicalis.com/>.



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