

White Paper

Cloud-Native Everywhere: Partnering with IBM on the Open Hybrid Cloud

Sponsored by: IBM and Intel

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EXECUTIVE SUMMARY

Business applications are critical to the success of an enterprise organization. Any loss of availability can have a direct and immediate negative impact. Enterprise IT organizations need to ensure business continuity of applications through enhanced availability and redundancy of IT infrastructure. Organizations can no longer afford large, complex IT-centric application modernization projects. They not only need to achieve cost savings today but also need to extend the value of the existing application investments aligned with business priorities. Huge modernization programs are hard to green-light and often fail to meet planned outcomes. A continuous application modernization approach enables application leaders to proactively manage costs, enhancements, and security throughout the application life cycle.

Application development practices in enterprise organizations are also targeted toward minimal disruption to application availability and hence follow traditional software development life-cycle practices. Longer product development cycles limit the ability of the enterprise to develop products faster and to bring products to the market more quickly. Modern application architectures such as cloud-centric, cloud-native, or microservices-based design enable applications to be more scalable, fault tolerant, and interoperable. Agile development processes enable application developers to develop and release product features faster. This combination of modern application architectures and development agility enables developers to build faster, thus enabling enterprises to innovate faster.

Enterprises are increasingly adopting hybrid, public, and multicloud platforms to speed time to market while keeping their applications secure. IDC estimates worldwide enterprise spend on public cloud infrastructure to surpass that on traditional IT infrastructure by 2022. Enterprises are also adopting modern application architectures and agile development processes to bring products to the market faster. While public cloud platforms and modern application architectures provide scale and agility, they are not without challenges. Some enterprises lack the skill set and maturity to operate cloud-based and cloud-native platforms. Enterprises also find managing heterogeneous technology difficult.

Open hybrid cloud deployment locations include public clouds, on-premises datacenters, colocation facilities, and edge locations such as remote offices, factories, warehouses, and retail stores. Enterprises require a unified platform to support both legacy and cloud-native workloads running on a variety of infrastructure options while simultaneously minimizing vendor lock-in. They also need a consistent operational experience across heterogeneous technology.

IBM delivers on the promise of open hybrid cloud through its portfolio of products, including Red Hat OpenShift and IBM Cloud Pak solutions, which are designed to provide a consistent and cloud-ready

deployment experience through containerized packaging. The Cloud Pak solutions reduce time to market for independent software vendors (ISVs) and enable secure, cost-effective, and scalable ways to build and deploy on modern infrastructure platforms. It is now possible to write an application once and deploy everywhere – private clouds, IBM Cloud, other public clouds, and a variety of emerging edge locations with consistency in how these applications are secured and managed.

IDC recommends using hybrid cloud environments to leverage the choice and flexibility they enable and to build a secure and scalable foundation for future technology innovations. IDC also recommends iterating on a multiphased, workload-centric approach and leveraging the right partnerships to succeed in hybrid cloud strategies.

This white paper discusses the benefits of open hybrid cloud platforms and best practices to leverage hybrid platforms to enable successful digital transformation along with examples of how IBM ISV partners are using these concepts to deliver customer success.

SITUATION OVERVIEW

Hybrid Cloud

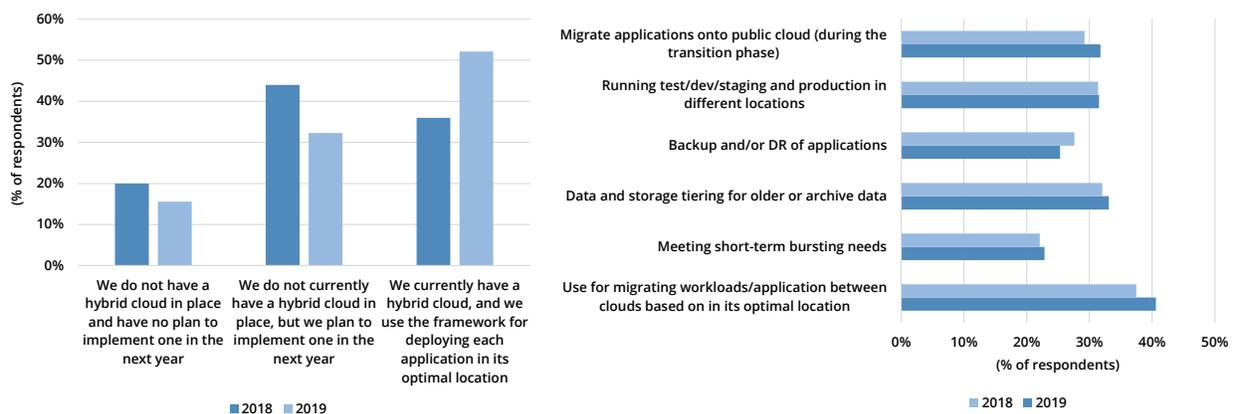
IDC defines a hybrid cloud as the usage of IT services (including IaaS, PaaS, and SaaS) across one or more deployment models and locations using a unified framework. This includes a combination of on-premises traditional IT, private cloud, and public cloud deployment models across multiple deployment locations. Hybrid cloud provides organizations flexibility and choice of infrastructure to deploy business applications and consistent operational experience across heterogeneous technology (see Figure 1).

FIGURE 1

Hybrid Cloud Survey Data

Q. How would you describe your organization's adoption of hybrid cloud?

Q. What are the top infrastructure use cases for which you use a hybrid cloud environment?



n = 1,129 for 2018 data, n = 1,529 for 2019 data

Source: IDC's *IaaSView Survey*, 2018 and 2019

IDC observes that enterprise adoption of hybrid cloud is increasing. In a recent survey (see *laaSView 2019: Worldwide Survey Results*, IDC #US45653819, November 2019), 52% of the respondents indicated actively using hybrid cloud. In the same survey, respondents indicated using hybrid cloud platforms for optimal workload placement, application migration to the public cloud, and data/tiering needs. Respondents also indicated skill set limitations, unclear ROI, and lack of off-shelf products as reasons for not leveraging hybrid cloud infrastructure. This is in line with other IDC research, which shows a lack of skill set, lack of consistency in tooling, and mismatched expectations on TCO as the primary challenges to adopting hybrid cloud platforms.

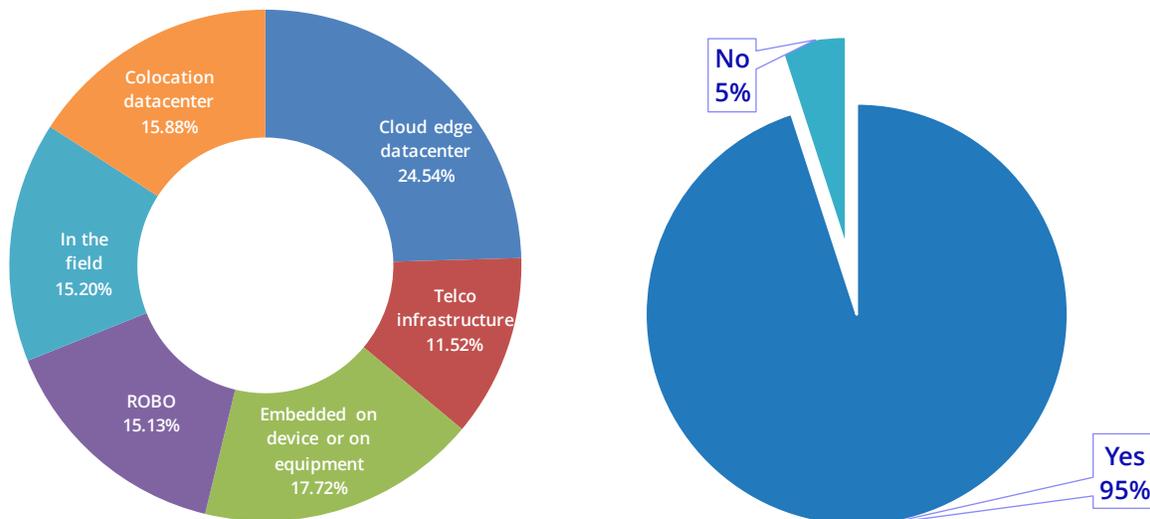
Edge computing has expanded the reach of hybrid clouds to include new categories of deployment locations, which increases the number of potential hardware types and access methods. Historically, these situations required specialized solutions that would then be integrated into existing infrastructure. This typically involved different methods of software development and management of remote systems.

The advent of an open hybrid cloud improves this situation by providing a common platform across both core and edge systems. Figure 2 illustrates the diversity of locations that enterprises must potentially support and shows that 95% of new edge solutions plan to use cloud-native platforms to drive consistency regardless of where the hardware and software are deployed.

FIGURE 2

Cloud-Native Primary Choice for a Variety of Edge Locations

- Q. *Where is edge infrastructure being deployed?*
- Q. *Will new edge solutions utilize cloud-native platforms?*



n = 637

Source: IDC's *IT Infrastructure Deployment for Edge Survey*, 2020

Cloud Definitions

IDC defines cloud services through a checklist of six attributes listed in Table 1 (see *IDC's Worldwide IT Cloud Services Taxonomy, 2019*, IDC #US45714519, December 2019). Infrastructure deployment is considered a cloud deployment based on the manifestation of all these attributes. To be considered as cloud deployment, an infrastructure deployment should meet all six attributes.

Traditional IT deployments include bare metal and virtualized server deployments that do not meet all six attributes. Most of the enterprise IT infrastructure deployments fall under this category.

TABLE 1

Attributes of IT Cloud Services

Attributes	Remarks
Shared, standard offering	Built for massive-scale, automated deployment
Delivered as an all-inclusive service	Pre-integrated and manages/updates all required resources
Elastic scaling	Dynamic, rapid, and fine grained
Elastic pricing capability	Tied to resource consumption or number of users
Self-service	Self-service provisioning and administration options
Published service interface/API	Programmable access via open/published API

Source: IDC, 2020

Deployment Locations

IDC categorizes deployment locations as described in the sections that follow.

On Premises

On-premises deployment location refers to enterprise datacenters or hosting providers (colocation). This does not include off-premises locations managed by service providers.

Off Premises

Off-premises deployment location refers to deployments located outside the enterprise customer's datacenters such as public cloud infrastructure and hosted private cloud.

Edge

IDC defines edge locations as facilities that exist between core datacenters, including public cloud infrastructure and endpoints. Edge computing has emerged to address the needs of applications and workloads that require low-latency response times, the ability to run in disconnected states, and situations where the cost of data movement is prohibitive.

Edge locations range from remote and branch offices to industry-specific places such as factories, warehouses, hospitals, and retail stores. One common denominator is that these locations often lack the physical security and IT staff of core datacenters, putting a heavy emphasis on remote management and automation. Edge computing also involves a combination of harsh operating environments and nonstandard hardware configurations, driving the need for a common platform that can integrate with public and private cloud environments.

Public Cloud Versus Private Cloud

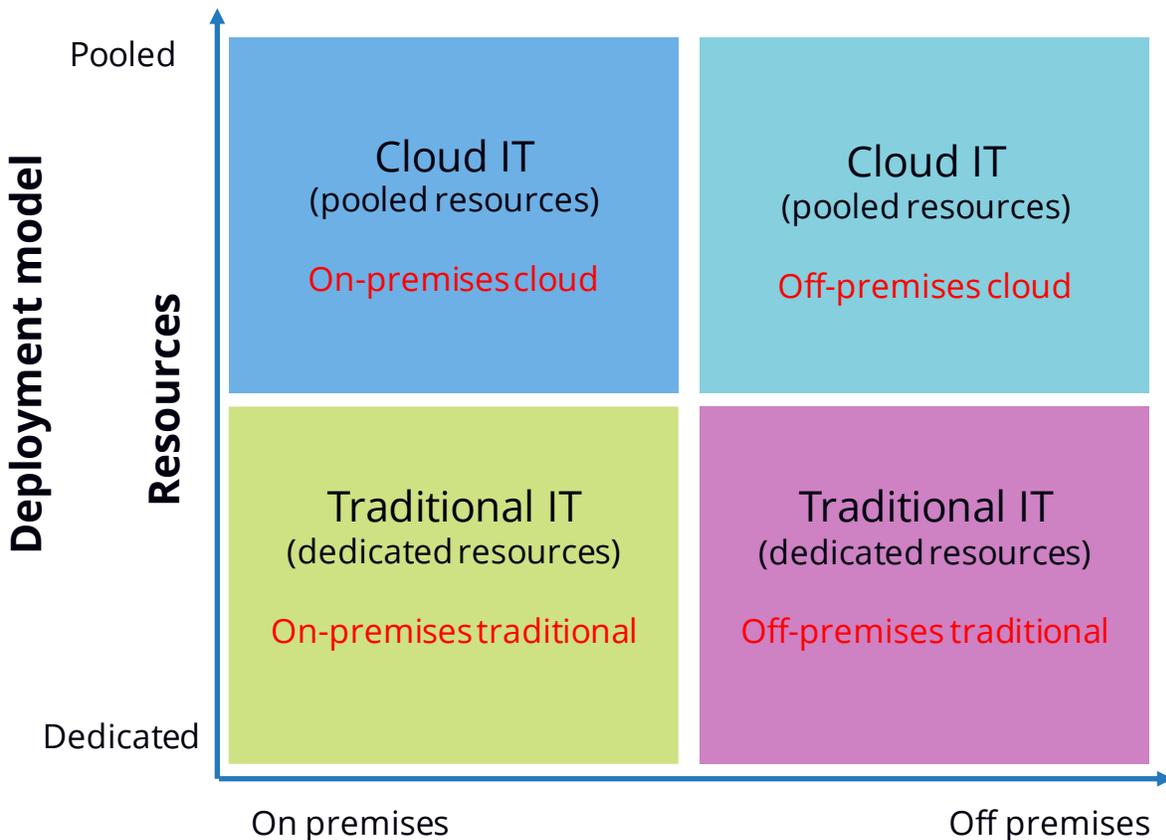
IDC categorizes infrastructure ownership as public or private based on the ownership and exclusivity of access.

Public cloud services are shared among unrelated enterprises and/or consumers, open to a largely unrestricted universe of potential users, and designed for a market, not a single enterprise.

Private cloud represents a pool of resources that are shared within a single enterprise or an extended enterprise, with restrictions on access and level of resource dedication, and defined/controlled by the enterprise, beyond the control available in public cloud offerings. In the case of a private cloud deployment, multitenancy refers to being shared among various business groups within an enterprise (see Figure 3).

FIGURE 3

IT Infrastructure Deployment Models and Locations



Source: IDC, 2020

Four Imperatives of an Open Hybrid Cloud

An open hybrid cloud integrates traditional IT, private cloud, and public cloud infrastructure, enabling enterprises to preserve legacy workloads, avoid lock-in through open source and choice, modernize applications, and simplify day 2 operations.

Several forces are driving organizations to this architecture. It can be described with four imperatives that drive the need for an open hybrid cloud (see Figure 4):

- **History:** Most companies do not have the luxury of starting with a clean sheet design where you can start from scratch. Whether legacy applications or hardware investments that are still in service, the requirement exists to preserve these resources as new technology is deployed.
- **Choice:** Long gone are the days when enterprises standardized on a single vendor. With the rapid pace of innovation, CIOs are playing the field, choosing solutions that best fit a specific need. They are looking to reduce vendor lock-in and have the freedom to integrate best-of-breed solutions.
- **Physics:** Network latency is often considered the Achilles' heel of cloud or other centralized infrastructure. While new access methods such as 5G promise to dramatically reduce latency, the physical distance, which can be represented in terms of the number of hops between endpoints and core computing assets, is problematic for real-time applications.
- **Law:** Compliance with industry or government regulations has an impact on where resources are deployed. Whether GDPR in Europe or CCPA in the United States, issues surrounding data sovereignty must be addressed.

FIGURE 4

Four Imperatives of an Open Hybrid Cloud



Source: IDC, 2020

CHALLENGES/OPPORTUNITIES

Challenges

Even though the concept of an open hybrid cloud has significant potential, organizations must navigate a set of challenges as part of their adoption. Very few organizations can start from scratch, so the journey to a cloud-native paradigm must consider existing processes and technology.

A typical starting point is rationalizing multiple development platforms and the overall application development workflow. This involves moving to a services-based architecture, API-driven communications, container-based infrastructure, and a DevOps mindset for how applications are developed, tested, and deployed. There are also concerns with integrating multiple security frameworks and management tools. While some of these problems can be solved with technology, there is also the human factor.

These new skills often do not exist in organizations with significant investments in legacy applications. This paves the way for new roles such as platform developers, build engineers, and multicloud architects. There is also a high level of emphasis placed on automation in areas such as continuous integration and continuous delivery (CI/CD). To aid in this transition, many technology suppliers and service providers offer training and certification programs.

Issues surrounding inconsistent development platforms, design methodologies, security frameworks, and management tools are amplified in edge locations. The variety of hardware and communication methods associated with edge computing can make standardization difficult. The effort and cost associated with the integration of these various components often lie with IT organizations, and that increases risk in projects that require applications that span core and edge locations.

Opportunities

Those willing to take the necessary steps to adopt the open hybrid cloud model can create value faster, increase business resilience, and reduce operating costs. Cloud-native approaches have accelerated the pace of innovation by reducing the time it takes to launch new product offerings. Developers spend less time managing the underlying resources and can instead focus on creating new functionality and user experiences.

More than ever, businesses are under pressure to react quickly to changing requirements to build and maintain a competitive advantage. This is especially true for ISVs that are looking to stay one step ahead of the competition. Abstracting logic from the underlying infrastructure with a microservices-based architecture makes it possible to automate platform changes to address variations in usage patterns and to increase the overall availability of services. It also easier to build and deploy new features incrementally without waiting for the next major release, allowing ISVs to focus vital resources on responding to customer needs.

Rearchitecting applications – deconstructing large applications into function-based containers – also has cost advantages. Just like virtual machines removed inefficiency from traditional systems, containers take the concept a step further by further removing redundancies in the architecture. The open nature of these platforms also reduces integration costs by standardizing the flow of data in a secure way between components. The open source community encourages collaboration, and the transparent nature in how problems are solved increases the overall strength of the solution.

Edge computing has the potential to create new opportunities for organizations. It unlocks use cases that are not viable in centralized computing models, whether due to latency inherent in wide area network (WAN) connections, including internet access to the public cloud, or the costs associated with moving large amounts of data for analysis.

This is especially true when applying machine learning and artificial intelligence (AI) to video or image data. In these situations, the value is in the events or insights that can be derived from the data rather than the raw feed itself. Applying logic to data at the edge makes it possible to orchestrate real-time actions without the delay of sending the information back to a central source. Examples include behavioral analysis for video surveillance and visual quality inspections in manufacturing.

IBM'S PLATFORM FOR THE FUTURE

IBM can address these common challenges and deliver on the promise of an open hybrid cloud – optimized by Intel technology for consistent performance and security, no matter where the workloads reside (see Figure 5).

FIGURE 5

IBM's Open Hybrid Cloud Platform



Source: IBM, 2020

IBM Cloud Pak Solutions

IBM Cloud Pak solutions are containerized packages that provide an easy, consistent, and secure way to deploy applications on any cloud platform. Cloud Pak solutions enable enterprises to leverage container technologies to build applications once and deploy anywhere across hybrid cloud infrastructure. They accelerate outcomes by enabling automated, intelligent, and secure workflows, and they are available for business applications, data, integration middleware, automation, multicloud management, and security.

IBM Cloud Pak for Applications

To help protect and optimize current investments, IBM Cloud Pak for Applications offers flexible licensing and deployment options for immediate cost savings. With IBM Cloud Pak for Applications, application leaders can maximize ROI, balance business requirements and risk, and equip developers with tools to quickly deliver value to the market.

IBM Cloud Pak for Data

As companies continue to harness the potential of AI, they need to use data from diverse sources, support best-in-class tools and frameworks, and run models across a variety of environments. With copious amounts of data recorded every day, business leaders are challenged to understand what's required for AI. And even if they did, much of data is inaccessible, untrusted, or unanalyzed. Simply put, there's no AI without an information architecture.

IBM recognizes the challenge that clients are facing. As a result, IBM introduced IBM Cloud Pak for Data with the goal of creating a prescriptive approach to accelerate the journey to AI: the AI Ladder, developed to help clients drive digital transformation in their business, no matter where they are on their journey. Cloud Pak for Data brings together all the critical cloud, data, and AI capabilities as containerized microservices to deliver the AI Ladder within one unified multicloud platform.

IBM Cloud Pak for Integration

Agile integration drives secure and timely access to data and applications at a lower cost. Today, more than ever, organizations require integration to transform engagement models and optimize channels while still maintaining business continuity. Traditional integration is costly and can't keep up with escalating demand. Without a new approach, integration work will consume significant time and cost of digital initiatives.

To remedy this, businesses need a modern, agile approach to integration – one that empowers extended teams to create integrations, leverages a complete set of integration styles and capabilities, and increases overall productivity.

IBM Cloud Pak for Integration is the platform for agile integration. We've seen companies significantly speed their integration development and reduce their costs of integration while increasing their overall operational agility.

IBM Cloud Pak for Automation

Companies looking to transform, or just do business as usual, are facing bigger challenges – from volatile customer demand to remote employees struggling to get work done. Bigger challenges are creating big opportunities to build more resilient and adaptive business operations with intelligent automation at the core.

IBM Cloud Pak for Automation lets companies quickly scale up or scale down to meet fluctuating customer demand, rapidly create new products and services to gain competitive advantage, and increase the productivity of remote and onsite workers. It is a complete and flexible set of integrated automation software that can be deployed wherever needed, on any cloud.

With IBM, companies can shape and execute their automation vision. IBM's intelligent automation software platform, along with IBM's global ecosystem of skilled business and IT consultants and deep industry expertise, helps companies meet their most complex operational challenges.

IBM Cloud Pak for Multicloud Management

The escalating volume and complexity of enterprise applications have introduced unique challenges in maintaining visibility and control across the application landscape. As organizations expand their application portfolio, it's common that an ever-increasing proportion of these applications will span a hybrid cloud environment. Today's collection of point management solutions held together with custom code are not only inefficient but also vulnerable to data breaches.

Cloud-native technologies are changing the way developers architect, code, and deploy, necessitating a change in IT processes. A new application-centric approach to management is required to drive the automation and efficiency necessary to ensure continuity of business operations at a lower cost.

IBM Cloud Pak for Multicloud Management is an application-centric, AI-infused platform for IT automation designed to provide full visibility and control. With Cloud Pak for Multicloud Management, companies can attain the level of automation required to achieve continuity of business operations while adapting quickly to changing demand.

IBM Cloud Pak for Security

As organizations move their business to the cloud, applications and data may be spread across multiple clouds and on-premises environments. Trying to secure this fragmented IT environment can be challenging. Security teams must undertake costly migration projects and complex integrations. In fact, more than half of the security teams surveyed struggle to integrate data with analytics tools and to combine data across their cloud environments to spot security threats.

IBM Cloud Pak for Security is a containerized software platform pre-integrated with Red Hat OpenShift. It connects to existing security data sources, enabling teams to search for indicators of compromise (IOCs) across any cloud or on-premises location and uncover new threats. Once threats have been found, Cloud Pak for Security allows teams to quickly orchestrate responses and automate actions from a unified interface.

IBM Edge Solutions

IBM offers a portfolio of services solutions backed by a broad ecosystem of partners to help enterprises and telecommunications companies speed their transition to edge computing in the 5G era. This effort combines IBM's experience and expertise in multicloud environments with Red Hat's industry-leading open source technology.

For organizations worldwide, the rollout of wireless 5G telecommunications networks, which bring blazing speed and extremely low latency – and minimal transmission delays – to mobile data, is designed to accelerate the utility of edge computing. With edge services, IBM Business Partners, and open multicloud solutions from IBM, enterprises will be able to tap into the potential of 5G to support

crucial uses such as emergency response, robotic surgery, or connected-vehicle safety features that benefit from the few milliseconds latency saved by not having to send workloads to a centralized cloud.

IBM's edge offerings run on Red Hat OpenShift, the leading enterprise Kubernetes platform that runs everywhere – from the datacenter to multiple public clouds to the edge. They enable enterprises to overcome the complexity of managing workloads across a massive volume of devices from different vendors and provide telcos the agility they need to quickly deliver edge-enabled services to customers. Clients across industries can now fully realize the benefits of edge computing, including running AI and analytics at the edge to achieve insights closer to where the work is done.

The IBM Open Hybrid Cloud with Intel

IBM and Intel maximize the value and speed of modern, data-centric workloads from the edge to the datacenter, accelerating innovation, insights, and competitive advantage. 2nd Generation Intel Xeon Scalable Processors deliver outstanding performance and enhanced security. Intel also offers libraries and tools that provide performance and security optimization for data-centric workloads.

This partnership is accelerated by IBM and Intel ecosystems:

- IBM has joined the Open Retail Initiative (ORI), a collaborative effort by Intel and other top technology companies that believe that open accessible solutions will accelerate iteration, flexibility, and innovation at scale.
- IBM is collaborating with Intel to leverage Secure Device Onboard (SDO) that provides a fast and more secure way to onboard any device to any device management system at scale.
- Intel has developed a curated portfolio of Market Ready Solutions solving a wide array of use case in many verticals.

IBM PARTNER ADVANTAGE

IBM is helping its partners create solutions and reach new clients through its ecosystem of experts and digital marketplaces. This creates many opportunities for ISVs looking to build and sell open hybrid cloud offerings.

With IBM Cloud Pak solutions, ISVs can build on an open flexible platform designed for enterprises, increasing speed, agility, and innovation. Viewed as the easiest path to application modernization, these solutions reduce R&D expense for ISVs by ensuring portability among the public cloud, private clouds, and edge deployment locations.

IBM PartnerWorld helps facilitate partner growth with a Build Track that aligns benefits that support partners building IP and innovative solutions. This includes skills training, certifications, and cloud credits for new partners and a Cloud Pak ecosystem program to assist. It also provides access to IBM's global Business Partner connect, facilitating collaboration between IBM partners to create new business opportunities, support common customers, and expand market reach. One business opportunity is IBM's Embedded Solution model, which offers customers commitment-based pricing for the IBM technology portion of their solution, allowing customers to operate from a predictable cost basis.

IBM Partner Testimonials

Zonysoft

Shanghai Zonysoft Co. Ltd. is an information technology provider focusing on the life-cycle management and application of unstructured data. In addition, the company provides business process automation solutions to several industries, including financial services, energy, and manufacturing.

Winner of an IBM Business Partner Award in 2014, Zonysoft has partnered with IBM for over nine years. "Partnering with IBM is a win-win situation," said Kai Wang, general manager at Zonysoft. "We only see benefit from working with IBM." With the intent of delivering a complete solution to its customers, the company believes the partnership has helped not only with technology but also from a selling and services perspective.

Zonysoft's cloud platform is based on IBM products, including IBM Cloud Pak for Automation. This enables the company to reduce engineering costs and develop customer solutions faster by building on top of a trusted product. The company specifically cites the scalability and open architecture of IBM Cloud Pak for Automation as key reasons it chose the solution to achieve its goals for business process automation.

This functionality proved essential for a Zonysoft customer – one of the largest insurance companies in China. In this example, the capabilities of IBM Cloud Pak for Automation are used for managing the distribution of invoices, automating the capture and processing of data. Because the solution leverages Red Hat OpenShift, it is designed to work both on premises and in the cloud, ensuring it can adapt to future needs.

DeSmart

Shanghai Decent Smart Information Technology Company (DeSmart) is dedicated to empowering enterprises with cutting-edge IT solutions. Founded in 2009, the company has provided efficient digital management and security applications solutions to more than 100 organizations.

A finalist for a 2020 IBM Beacon Award, DeSmart provides business solutions that consist of business process management, enterprise portals, system integration, and data governance. The company has been an IBM partner for six years, using IBM technology to solve customer requirements in a variety of industries, including retail and high-end manufacturing. IBM provides the necessary components to quickly build scalable and resilient solutions.

DeSmart uses IBM Cloud Pak for Automation, IBM Cloud Pak for Integration, and IBM Cloud Pak for Data. "Many customers are going through the journey of transforming their traditional applications to cloud," said Ivan Zhang, general manager for DeSmart. "IBM Cloud Pak solutions help our customers accelerate this journey to cloud – either private cloud or public cloud." A key decision point for choosing IBM technology is its ease of use and integration capabilities to legacy systems. Zhang added, "Red Hat OpenShift is the most stable and commercialized open source platform on which to build business applications."

DeSmart believes that IBM has been successful in combining its experience in traditional IT software with the concepts of an open hybrid cloud. Customers are demanding solutions that are designed with a microservices architecture, simplify data integration, and support continuous development. It is also important to support complex applications that can scale from small to large.

The issue of scalability was a primary requirement for a DeSmart customer, which owns and operates one of the largest chain of pharmacies in China. Because of COVID-19, the pharmacy needed to migrate its applications to support mobile devices and automate more of its processes. This involved integrating a financial system with several others: supply chain, orders, and reimbursements. Using IBM Cloud Pak solutions, the customer was able to reduce the time to implement process changes from 10 days to 3 days. DeSmart plans to implement IBM Cloud Pak for Applications to rapidly develop and deploy new applications.

Knowis

Knowis AG is an independent software vendor located in Regensburg, Germany, that specializes in banking solutions. Founded in 2004, the company is focused on developing flexible and agile software solutions that enable automation in knowledge-intensive and technically complex application areas.

Knowis has been partnered with IBM for 10 years, initially implementing middleware solutions on IBM WebSphere and IBM Business Process Manager. Today, the company has an OEM relationship with IBM and builds products on top of IBM Cloud Pak for Data. As a partner, Knowis has built strong and trusted personal relationships within IBM, which is critical to navigating the vast array of resources that are available to ISVs.

"The main challenge for our banking customers is how to bring their workloads like credit applications or other business processes to the cloud," said Julius Ollesch, sales leader at Knowis. "Customers are concerned with app modernization, shifting to container-based technology, and being able to do business from anywhere." Many banks do not have container platforms and are just now exploring cloud-native technologies. According to Ollesch, "IBM Cloud Pak solutions have been very successful in terms of raising awareness and making the technology easier to consume."

Knowis has developed a software product named Financial Services Workbench. It features a microservices design environment that was implemented as a common model for business analysts and developers. Through business solution templates, the company claims that it can save its customers from six to nine months by reducing the effort needed to build and deploy applications. The software has been used to build end-to-end lending platforms, where banks automate processes that include risk assessment and loan origination while applying advanced analytics to the data.

Saving time is also important to Knowis. "From a technical point of view, we like to keep the depth of what we do close to domain-specific areas and not worry about the infrastructure problems that you need to solve," said Jörg Erdmenger, vice president of engineering for Knowis. "Banks need a container platform for running in a highly regulated environment. IBM Cloud Pak solutions and Red Hat OpenShift largely solve those problems from a technical level." Security concerns are a main reason Knowis chose Red Hat OpenShift over a generic Kubernetes distribution.

Both Ollesch and Erdmenger agree that IBM has made it easier to build and deploy cloud-native solutions. They also stated that many of their customers want the flexibility to run applications on any cloud, including private, public, and hybrid. Knowis recognizes that partnering with IBM provides many benefits to a growing ISV and plans to continue to evaluate additional IBM Cloud Pak solutions as customer needs emerge.

CONCLUSION

Enterprises want the ability to build once and deploy anywhere. To innovate faster with more flexibility in deployment models, organizations have begun adopting cloud-native technology and development practices. This has driven a need for a common platform that unifies operations, management, and security across public clouds, private clouds, and edge deployment locations.

IBM is delivering on the promise of an open hybrid cloud with IBM Cloud Pak solutions that consist of cloud-ready open software packages optimized for Red Hat OpenShift with instant deployment on IBM Cloud or the infrastructure of choice. The platform deeply embeds security and compliance in all of its components with a common control plane with centralized visibility. In addition, IBM is enabling ISVs to bring partner solutions to market faster and build competitive advantage through the IBM PartnerWorld program.

IDC believes the open hybrid cloud will enable enterprises to build resilient and smarter businesses that are able to maintain business continuity, control operational costs, and rapidly adapt to change.

About IDC

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