Unlocking the full value of cloud

Create modern core applications with the latest technology and run them in the environment of your choice with IBM Cloud.

Executive Summary

IBM Cloud provides the essential open, flexible tools clients need to get all the benefits of cloud and create modern core applications with the best technology in the environment of their choice.

– We offer a true hybrid multicloud environment that gives clients the ability to run and manage their data and applications on the cloud of their choice.

– We completed a two-year journey to rebuild the IBM public cloud on a foundation of open source software, security leadership and enterprise-grade infrastructure for running our clients' core businesses.

– We've also transformed our software portfolio to be cloud native and delivered as pre-integrated solutions, called IBM Cloud™ Paks. This includes more than 100 products. IBM's expansive software has been optimized to run on Red Hat® OpenShift® Platform, the industry's most comprehensive Kubernetes platform.

Taken together, clients now have the unique ability to build mission-critical applications once and run them anywhere.

Cloud computing is fundamentally changing the way software applications are developed, deployedand continuously improved to accelerate digital transformation. Development of cloud native applications—a collection of small, independent and loosely coupled services—speeds up how new applications are built, how existing ones are optimized, and how user feedback is incorporated for continuous improvement.[1] Expressed another way, applications can now evolve at the pace of business—to allow them to quickly respond to your changing market and customer demands.

When organizations invest in cloud native, they want a consistent development experience with the rapid deployment of a new function. But the cloud really requires more—it requires consistency across private, public and on-premises environments—otherwise known as hybrid multicloud environments.

Adopting cloud computing allows organizations to increase the scalability and availability of applications through self-service and on-demand provisioning of resources, as well as automating the application life cycle from development to production.[2]

This is why our acquisition of Red Hat is so important to our strategy. Together, we expand our ability to deliver all the benefits of cloud, but with the control and flexibility demanded by business needs.

With a true hybrid multicloud approach, clients can select the best architecture to address the unique application, data and workload requirements for their businesses. This approach is based on open technologies, such as Linux® and Kubernetes, with a rich ecosystem and choice of deployment location. Organizations with a hybrid multicloud environment can securely deploy, run and manage their data and applications on the cloud of their choice. As a result, clients can determine and control the right comprehensive cloud strategy for their business.

Clouds that are integrated and holistically managed create a distinct competitive advantage. With one common environment, clients can build once and deploy anywhere. They can innovate with speed and agility— with the support of a vast, open ecosystem of passionate developers and partners.

Central to IBM's hybrid multicloud strategy is an infrastructure-independent common operating environment that runs anywhere—from any data center to multiple clouds to the edge. It comprises Red Hat Enterprise Linux and Red Hat OpenShift enterprise Kubernetes platform—trusted and certified by t housands of organizations around the world— and is available anywhere they run.

– Choose any cloud infrastructure, on- or off-premises, and seamlessly manage and integrate across multiple clouds.

– Modernize, build, deploy and run core business applications in a faster, more secure way.

– Accelerate time to insight from data across any cloud environment or on-premises with the ability to connect to all data types where they reside, apply self-service analytics and adopt AI at scale.

Red Hat's deep engagement in open source communities combined with the trust, technology enterprise and industry expertise of IBM enables the world's only hybrid multicloud environment that is truly open.

IBM is also contributing key elements of its hardware design IP to the open source community, making it the only company with a fully open system stack—from the hardware foundation to the top layer of software. With both private and public cloud capabilities, the Z Systems enterprise platform provides clients with the highest-level of data privacy, security and resiliency anywhere for their mission-critical applications—and extends it across a hybrid multicloud environment.

Experts in IBM Services can help clients craft an effective cloud strategy to realize their business objectives— modernize applications, build cloud-native capabilities or optimize and manage workloads on a hybrid multicloud environment inclusive of their traditional infrastructure.

With an IBM Garage engagement, our clients' developers and business leaders can work side by side with IBM experts to deliver minimally viable products to test in market in as little as three weeks—and that scale rapidly into production for lasting business results.

While clients have flexibility and choice of cloud infrastructure options, the IBM public cloud stands out by providing them with the most open and secure public cloud for business.

IBM just completed a two-year journey to rebuild its public cloud on a foundation of open source software, security leadership and enterprise-grade infrastructure. It delivers trusted and secure solutions and access to innovation backed by deep industry expertise. It's a brand-new cloud—that's also battle-tested, trusted and proven—for running clients' core businesses.

It benefits from open innovation and is the best public cloud for Red Hat OpenShift workloads. Clients can build and run applications with ease using native cloud services or deploying on managed Red Hat OpenShift— bringing instant deployment, automated vulnerability management, and self-healing resiliency to the industry's most comprehensive enterprise Kubernetes platform.

IBM is a leader of running Kubernetes production workloads at scale with more than 16,000 production clusters deployed, supporting billions of transactions per day. Automated deployment of IBM Cloud Paks provides a seamless 'out-of-box' experience. From the hypervisor to developer tools to advanced services such as blockchain and AI/ML, open source is in our platform DNA.

IBM's public cloud provides security leadership with market-leading data protection. It has been designed with the exacting demands of the world's largest and most complex organizations in mind. It uses the same state- of-art cryptographic technology that financial institutions rely on. The data clients store on the IBM public cloud is theirs and theirs alone. We allow clients to bring their own key that no one but they can see—not even us. They can build and run their core business applications and workloads with industry and government compliance, single dashboard visibility and multiplatform portability.

Our public cloud is enterprise-grade for reliable and robust workloads. Only on IBM's public cloud can clients span classic enterprise multi-architecture lift-and-shift and broad VMware migration to cloud-native leadership with broad support for Kubernetes, Knative, Istio and Cloud Foundry. IBM has the #1 public cloud for VMware, and provides cloud migration for Power AIX, IBMi, Z, SAP and all of our clients' mission critical applications. Whether it is bare metal, GPU or dedicated virtual compute, IBM's compute choices and configurable auto-scaling allow clients to optimize for dynamic, demanding, sensitive and secure workloads.

Trusted by 47 of the Fortune 50, 10 out of 10 of the world's largest banks, and 8 out of the 10 largest airlines, IBM's public cloud stands up to the most strenuous security, performance and scalability requirements. And with more than 100,000 experts and consultants redesigning processes, apps and cloud infrastructures, IBM has the expertise clients need to craft an effective cloud strategy to realize their business objectives.

With the IBM Cloud Paks, we have transformed our software portfolio to be cloud-native and optimized to run on Red Hat OpenShift.

The Cloud Paks are enterprise-ready containerized software solutions that give clients a faster, more secure way to move their mission-critical applications to any cloud, public or private. They are flexible and consumable and IBM-certified to secure the entire stack. They can run anywhere and install easily in any environment. They provide a common operating model and set of services—including identity management, security, monitoring and logging—as well as improved visibility and control across clouds through a unified and intuitive dashboard.

The basis of the IBM Cloud Paks is the more than 100 products from across IBM's expansive software portfolio that are optimized to run on Red Hat OpenShift. The Cloud Paks provide full software support and secure the entire stack—from hardware to applications—to help clients rapidly migrate, integrate and modernize mission-critical applications on any cloud. They are easily deployed, delivered as packages tailored for specific client use cases and will be sold through a consumption-based pricing model.

The first five Cloud Paks are available now—and over time more software and applications will follow.

IBM Cloud Pak™ for Applications
Helps clients modernize, build, deploy and run applications. Reduces development time by up to 84 percent.[3]

IBM Cloud Pak for Data
Simplifies and automates how organizations deliver insights from all data. Customizes to unique data landscapes with an open and extensible architecture, on any cloud. Virtualizes all data for AI 500 percent faster.[4]

IBM Cloud Pak for Integration
Helps clients integrate apps, data, cloud services and APIs. Designed to eliminate 33 percent of integration costs.[5]

IBM Cloud Pak for Automation
Helps clients transform business processes, decisions and content. Reduces manual processes by up to 80 percent.[6]

IBM Cloud Pak for Multicloud Management
Provides clients with multicloud visibility, governance and automation. Reduces operational expenses by up to 75 percent.[7]

The next big wave of digital transformation requires a true hybrid multicloud approach, and that is what the IBM Cloud offers today.

To provide our clients the leading capabilities, skills and talents they need to succeed, we are transforming IBM to be cloud-focused–across our full offerings of software, services and systems.

For more information, visit ibm.com/cloud.

Sources

1. https://www.redhat.com/en/topics/cloud-native-apps

2. https://www.redhat.com/en/topics/cloud-native-apps

3. Responses from the organizations surveyed and Ovum's own data indicate that the speed to market can be reduced by as much as 84%, depending on which market is being evaluated. Figure 1 shows the reduction in time to market in the fintech sector achieved using IBM Cloud Private, which was on average a drop from 180 days to 15 days.
Sources: http://ibm.biz/Ovum-WP (Page 6)

4. Average speed gain from performance testing of data virtualization vs. federation for access to data from relational databases, data warehouses, and Hive data sources using the TPC-DS benchmark. Testing conducted on May 2019 by the Data & AI development team at IBM Silicon Valley Labs. For additional information, please contact Mukta Singh, Offering Manager, Hybrid Data Management.

5. "This can help companies cut the time and cost of integration by 1/3, while staying within their unique requirements for security and compliance." Substantiation: Our customer Aetna has shared their results with us which is where this initially came from. In addition, the Cloud Integration Platform includes API Connect. We have a published Forrester TEI that includes the following statements on development savings "A 30% improvement in time-to-market for internal development of data and analytics projects" "A 35% improvement in time-to-market projects by public developers consuming APIs" This includes a breakdown to cost savings specifically that is much higher than what we are claiming here.

6. "With the Operational Decision Manager, the bank was able to set up workflows that enable faster approval of 80% of all loan requests. "Some loan approval processes were taking days, sometimes four to 10 days depending on the exceptions; now 80% of our loan applications flow straight through and are done in seconds." Source: https://www.ibm.com/downloads/cas/O5A0BD4R

7. Reducing the operational expense of supporting large-scale dynamic cloud-native environments is a key value proposition of container management platforms. The survey discovered that, on average, organizations achieved a 75% reduction in operational overhead in managing the cloud-native environment. This operational efficiency gain comes in three main areas identified by the survey where using a container management platform approach to cloud-native management yields savings.
Sources: http://ibm.biz/Ovum-WP (Page 6)