IBM **Services**

IBM and Red Hat: Delivering the SAP-enabled Intelligent Enterprise

The IBM-Red Hat partnership represents a powerful synergy in today's hybrid multicloud world, geared to help SAP customers streamline their cloud migration and accelerate their enterprise transformation – with complete platform independence

IBM

IBM and Red Hat: defining the open, hybrid cloud future

The acquisition of Red Hat® aligns with IBM's strategy for cloud and its commitment to open standards. Red Hat is the global leader of the Linux platform, holding close to 70 percent of the paid Linux market share and trusted by 75 percent of the Fortune 500.

Today, the digital transformation story is centered around hybrid multicloud. In fact, 94 percent of enterprises now have hybrid cloud models and require solutions optimized for their hybrid environments. Organizations also want to use vast amounts of 'on' and 'off' prem data to deliver faster and better insights, and even go further and use this data to facilitate 'machine-learned' improvements to their business processes. The IBM-Red Hat partnership unlocks the value of hybrid cloud for business, enabling enterprises to access all the benefits of cloud, but with the control and adaptability demanded by business needs.

The power and flexibility of Red Hat's open hybrid cloud technologies combine with the scale and depth of IBM's innovation and industry experience, delivering distinct advantages such as:

Reduced vendor lock-in
Innovate anywhere, on-premise or with any cloud provider, with a hybrid cloud platform using the latest cloud technologies from any provider

Portability
Modernize and develop once, and run anywhere with open standards that enable multivendor portability without lock-in

Resiliency
Run SAP HANA and SAP NetWeaver workloads with industry-leading reliability and manageability. Configure SAP for both High Availability and Disaster Recovery. Gain pro-active insights into security and performance issues before they become a problem.

Ecosystem
Speed innovation by leveraging an expansive ecosystem of open source developers, partners, and solutions

Developer reach
Tap into an open source community of over 14 million developers with extensive industry and cloud expertise

Network effect
Leverage a global network of services integration, delivery, and innovation centers providing deep technical and industry solutions

Multicloud management
Ensure visibility, control, and service quality across all clouds, vendors, and clusters with consistent multicloud management

Faster insights
Securely connect everything and create new insights faster by integrating applications, data, and AI solutions across cloud environments

*Sources: IBM MD&I; IDC Cloud Forecast; BCG & McKinsey

Building advantage for SAP customers

The coming together of IBM and Red Hat brings the best of both worlds to SAP enterprise clients. Both IBM and Red Hat have long-standing partnerships with SAP and collaborate on technologies and solutions that accelerate digital transformation.

The IBM-SAP partnership
IBM has been working with SAP since 1972 to deliver superior solutions for enterprise customers. IBM is an SAP Global Platinum Partner with more Global Partner Program Certifications than any other SAP partner and employs over 37,000 SAP consultants globally. The partnership has been consistently recognized by SAP, with IBM winning 35 SAP Pinnacle Awards.

The IBM-SAP digital transformation partnership enables enterprises to unlock business value through a host of solutions that leverage AI, cognitive computing, and blockchain.

The Red Hat-SAP partnership
Red Hat has a 20-year-long association with SAP and is a member of the SAP Benchmark Council. The two companies have worked together to champion innovation in the enterprise data center with Red Hat Enterprise Linux for SAP Solutions. The partnership also extends to emerging technologies such as Kubernetes, cloud, Internet of Things, and SAP Data Hub. Red Hat OpenShift is a multicloud platform that delivers an enterprise Kubernetes environment for deploying and managing container-based workloads like SAP Data Hub.

The collaboration draws on the respective strengths of the two partners: Red Hat's position as the market-leading provider of open source platforms and SAP's global expertise in business software.

Supporting the pillars of the Intelligent Enterprise

The Intelligent Enterprise is SAP's vision of the next era of enterprise computing. IBM helps accelerate this vision using Red Hat open source solutions that support key pillars of the Intelligent Enterprise, as defined by SAP. IBM and Red Hat serve as the enterprise transformation partner for SAP clients – providing services, products, and infrastructure support across the SAP ecosystem, for any platform.

The objective of tailoring SAP to an organization's specific business processes and requirements is to maintain a "clean core". In other words, it is to minimize the amount of customization in the core SAP modules. Custom modifications and development are instead done on a cloud-native DevOps platform. This is where Red Hat OpenShift can play a key role, and what makes the Red Hat value proposition unique to SAP customers and workloads. Customers can embrace SAP Cloud Platform PaaS for side-by-side extensions, keeping the core "vanilla" and managing delivery extensions in the SAP Cloud Platform.

Moreover, Red Hat Enterprise Linux for SAP is supported on-premise, on all major cloud providers and OpenShift as well. This means SAP clients can run not only an enterprise-class Linux operating system, but also SAP extensions anywhere, with great flexibility and independence.

The promise of the open hybrid multicloud

SAP customers looking to migrate to the cloud face several challenges. To begin with, these enterprises need more choice when they upgrade and innovate with DevOps and container platforms, whether on-prem or in the cloud. They should also be able to deploy or migrate their SAP applications to any cloud provider, while preserving and optimizing their existing investments. Moreover, since all SAP customers must migrate to SAP S/4HANA by 2027, they need to develop and execute an S/4HANA migration strategy in addition to their cloud migration strategy.

To help enterprises get past these challenges, IBM and Red Hat have together built a next-generation open hybrid cloud solution. This hybrid multicloud platform enables SAP clients to accelerate their cloud journey without fear of technology or vendor lock-in, and with the lowest TCO. The platform is designed to provide easy integration across all the cloud environments and traditional IT; faster movement of applications, workloads, and data between the clouds; and consistent and secure management of the new mix of cloud environments.

SAP customers can begin their journeys with on-premise cloud capabilities, customize or extend SAP applications using cloud-native DevOps platforms, and easily deploy on-premise or migrate to any cloud provider at a later time. The migration to SAP S/4HANA is also seamless as SAP HANA runs only on Linux, and Red Hat Enterprise Linux is certified and tailored to support SAP HANA on both Intel and IBM Linux Power server platforms.

Complementing the SAP architecture

In combination, IBM and Red Hat offer solutions that address various needs across all the different layers that make up SAP's architecture – be it SaaS, services, data management or multicloud infrastructure.

SaaS (SAP Fieldglass, SAP Hybris, SAP Ariba, SAP Success Factors, SAP Concur)
– IBM Cloud Pak™ for Data simplifies and automates how you can derive insights from data across SAP SaaS stacks and virtualize data for AI.

– IBM SAP and Cloud Consulting Services partners with you from consultation through implementation of a host of SAP applications.

– Red Hat Universal Base Image enables you to build, share, and collaborate on your containerized applications anywhere.

– Many of the SAP SaaS applications run on Red Hat within SAP data centers.

Integration
– IBM Cloud Pak for Applications helps modernize existing applications and build new cloud-native applications.

– IBM Cloud Pak for Integration enables you to connect applications and data across multiple clouds.

– Red Hat 3scale API Management makes it easy to manage APIs and drive agile integration.

– Red Hat Fuse allows your team to create, extend, and deploy integrated services independently.

SAP Cloud Platform
– IBM Garage™ offers an immersive environment to ideate, quickly create and scale, and deliver solutions that are ready to integrate.

– IBM Cloud™ private edition for the SAP Cloud Platform delivers a secure, dedicated environment to accelerate innovation.

– SAP Data Hub running on Red Hat OpenShift Container Platform, which is also available on IBM Cloud, helps you orchestrate data of any volume, velocity, and variety, facilitating faster insights and improvements to business processes based on machine learning.

Infrastructure for SAP HANA
– IBM Power Systems deliver an agile infrastructure that accelerates deployment by enabling faster provisioning of HANA instances, and reduce operational costs by simplifying management, scaling cost effectively, and maximizing uptime.

– Red Hat on IBM Power Systems and IBM Storage simplify and accelerate SAP HANA deployments.

– Red Hat Enterprise Linux 8 for SAP Solutions on IBM Power Systems (POWER9™) provides a consistent, flexible platform across POWER® implementations running SAP applications, delivering a common control plane that easily integrates into broader data center operations.

Services and Data Management
– IBM Impact Solutions deliver enhanced and industry-specific SAP Model Company offerings that drive the transformation into AI-enabled enterprises.

– IBM Managed Services for SAP Applications manages and monitors your operating systems, databases, and enterprise applications. Availability and performance SLAs are provided at the SAP application layer (BASIS), rather than just the hardware or operating system layer.

– Red Hat Enterprise Linux for SAP Solutions helps you run an optimized infrastructure for SAP application and data management workloads. Red Hat Satellite provides a central dashboard portal to monitor and manage your multiple RHEL environments. Red Hat Insights provides prescriptive analysis and insight into potential security or performance issues.

Open Runtimes
- IBM Cloud Foundry Enterprise Environment offers an isolated environment for building cloud-native applications using IBM Cloud services.

- Red Hat OpenShift provides an enterprise-ready Kubernetes container platform to manage hybrid cloud and multicloud deployments.

Multicloud Infrastructure
- IBM Power Systems and IBM z Systems® on IBM Cloud help accelerate SAP applications by enabling teams to provision faster, scale affordably, and maximize uptime.

- Red Hat Ansible Automation provides simple, agentless automation technology to easily manage, change, and adapt your IT infrastructure.

Delivering the Red Hat OpenShift advantage

For containerized applications, Red Hat OpenShift brings a truly multicloud containerized platform that enables portability from one cloud to the other or to on-prem and vice versa. Additionally, you get the freedom to use OpenShift for all cloud-native applications – from SAP, IBM or other providers. OpenShift represents the first real and proven option for one common runtime environment. This platform is supported on IBM Cloud, Amazon Web Services, Microsoft Azure, Google Cloud Platform, and more.

Also, SAP's cloud-native development environment, SAP Cloud Platform (SCP), would run on top of Red Hat OpenShift. SAP is on a path to containerize its applications in the future. In line with this strategy, OpenShift delivers interoperability, flexibility, and cloud independence for SAP applications.

"Our Red Hat stack has helped us become faster and cloud independent. With Red Hat OpenShift Container Platform, for example, we can start implementing a new application immediately, without waiting for any infrastructure, allowing us to produce results in just a few days, and have an MVP in just a few weeks."

– Lufthansa Technik

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