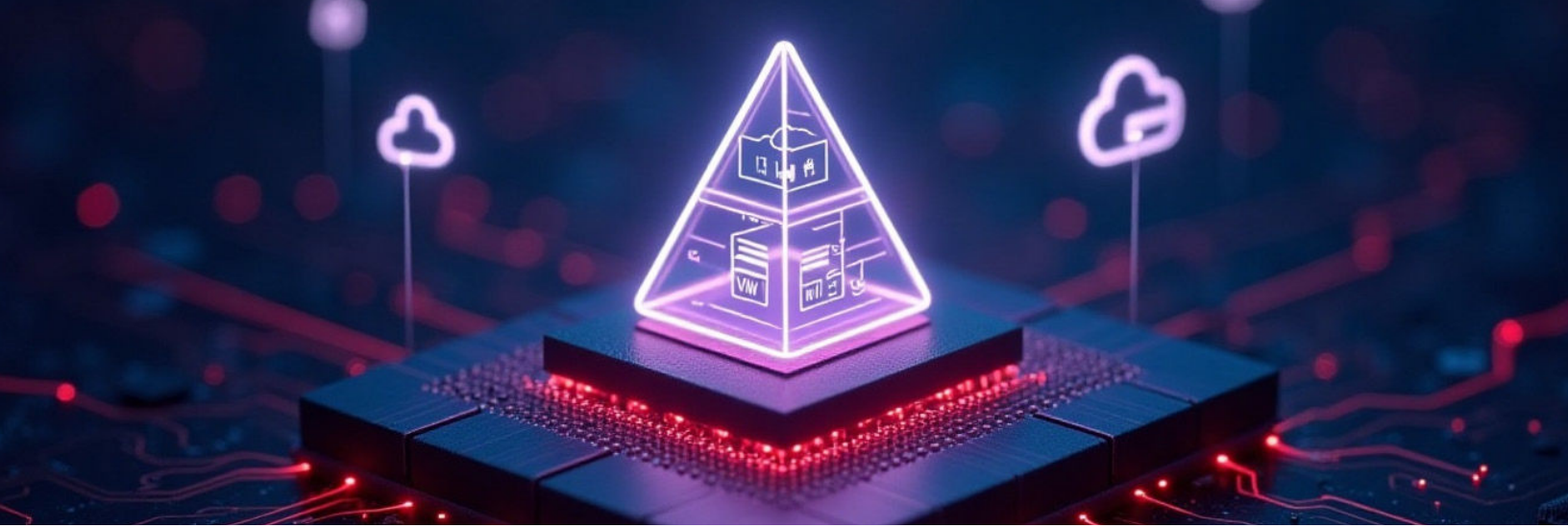




Unlocking the Future of Hybrid Cloud with Red Hat OpenShift Virtualization



Executive Summary

The virtualization market is at a pivotal moment. Recent industry shifts, including notable acquisitions and licensing changes, have created pricing uncertainty and operational challenges, prompting organizations to reconsider their existing virtualization approaches. As enterprises navigate these changes, they balance the need to control costs, maintain operational stability, and adopt flexible hybrid cloud strategies to support future growth. The need to modernize without disrupting legacy infrastructure has never been more apparent.

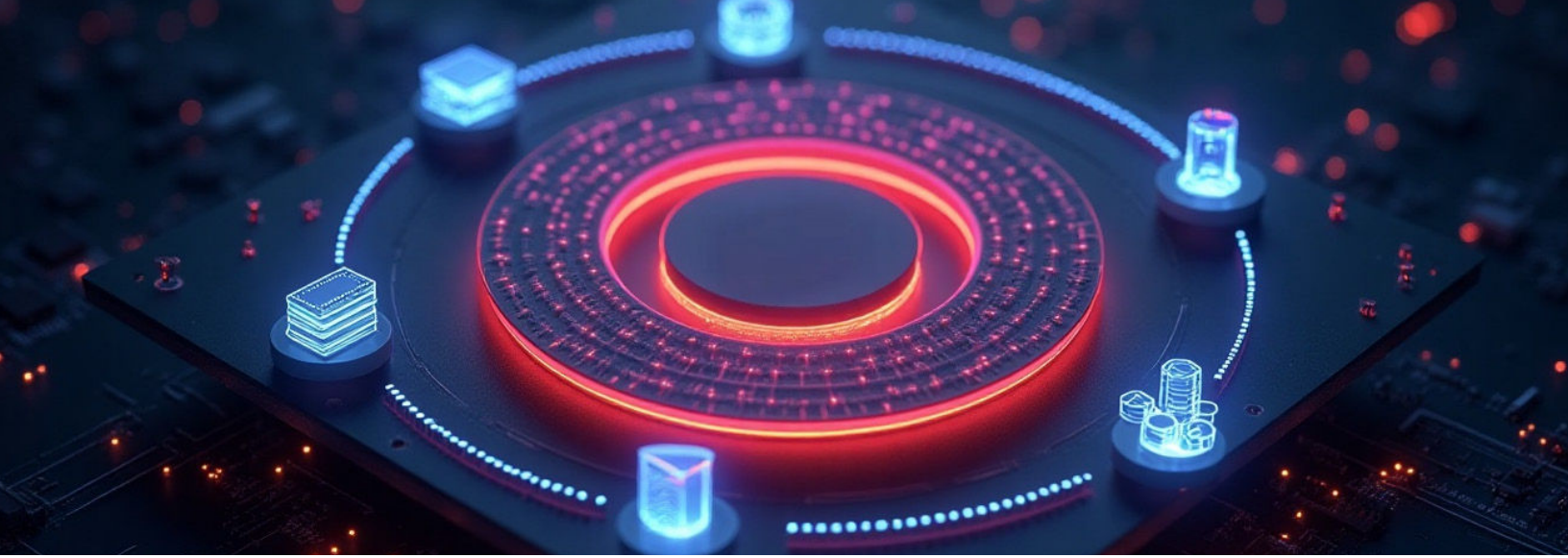
Layered on top of this is the growing complexity of multi-cloud environments, which is compelling senior executives in both large and small enterprises to adopt unified platforms that can streamline operations across on-premises, cloud, and edge locations. At the same time, many organizations are facing time-sensitive decisions about virtual machine (VM) migration. A seamless, low-risk VM migration strategy is becoming a critical first step in this transition, allowing businesses to move workloads confidently while laying the foundation for broader modernization if and when required.

Virtualization solutions that offer management efficiency, enhanced security, and scalability are now essential as organizations balance embracing innovation with operational stability and cost control.

Red Hat OpenShift meets this challenge by providing a customer-centric path that begins with migration and VM hosting on a modern platform. For organizations focused on immediate VM needs, OpenShift Virtualization Engine is a dedicated edition of OpenShift that offers a cost-effective solution to exclusively run and manage VMs. It is designed to simplify the transition from legacy systems, allowing organizations to migrate their virtual machines with confidence and minimal disruption.

When the time is right, customers can non-disruptively upgrade to the full Red Hat OpenShift platform to unlock broader modernization capabilities. This is possible because OpenShift Virtualization, a function of the broader OpenShift platform, is an embedded feature within all OpenShift editions. By upgrading, organizations can manage both VMs and containers on a single, unified platform, creating operational consistency across hybrid environments and paving the way to build new cloud-native applications.

This modern approach streamlines and increases operational efficiency, helps manage costs and enhances security. It provides a clear, de-risked pathway to modernization, allowing organizations to modernize existing and create new, modern cloud native applications. The platform is supported by an intuitive consistent management interface and a natural language, AI-powered assistant to ensure virtualization administrator teams can more easily transition. Backed by Red Hat's proven open-source expertise and an extensive partner ecosystem, OpenShift provides the flexibility and stability needed to future-proof IT infrastructure and help drive innovation.



Key Benefits

Red Hat OpenShift offers a customer-centric journey from virtualization to modernization, addressing immediate VM migration and management needs while providing a clear path to future innovation. For organizations focused solely on migrating and managing their existing virtual machines, OpenShift Virtualization Engine—a dedicated virtualization edition of OpenShift—provides a cost-effective and streamlined solution. With included tools like the migration toolkit for virtualization (MTV), organizations can transition their VM workloads from alternative hypervisors to Red Hat OpenShift with minimal operational disruption.

When ready, organizations can seamlessly upgrade to the complete Red Hat OpenShift platform. This unlocks the ability to manage both VMs and containers in a unified environment, unlocking a comprehensive set of modern development tools and services, such as CI/CD pipelines, service mesh and serverless. This flexible approach ensures that whether an organization starts with dedicated VM hosting using OpenShift Virtualization Engine or aims for comprehensive hybrid cloud management and application modernization with the full Red Hat OpenShift platform, they can leverage a robust set of benefits to support each stage of their virtualization journey:

1. Seamless Migration Path

OpenShift Virtualization simplifies the transition from traditional virtualization platforms with an included VM migration tool, MTV, which provides an established migration process. This allows organizations to migrate VMs efficiently while maintaining operational stability.

2. Unified Management of VMs and Containers

OpenShift delivers a unified console for managing both VMs and containers, which simplifies operations and reduces complexity. This integration, along with Red Hat Advanced Cluster Management for centralized VM lifecycle management, offers organizations a way to maintain consistency across on-premises, cloud, and edge environments while enabling smoother transitions from heritage systems to modern architectures.

3. Cost Optimization

With efficient resource allocation and hybrid cloud management, OpenShift Virtualization helps organizations control IT investments. Organizations can maximize ROI while reducing operational costs with minimal disruption during the transition from VMs to containers. Also, OpenShift Virtualization Engine offers a competitively priced solution for organizations seeking a dedicated modern VM hosting platform, helping to control virtualization-specific costs.

4. Enterprise-Grade Security and Support

Backed by Red Hat's enterprise-grade support, organizations can expect a secure, stable, and supported platform. Supported by an active community, along with an extensive partner ecosystem, OpenShift Virtualization benefits from continuous innovation and ongoing improvements.

5. Clear Pathway to Modernization

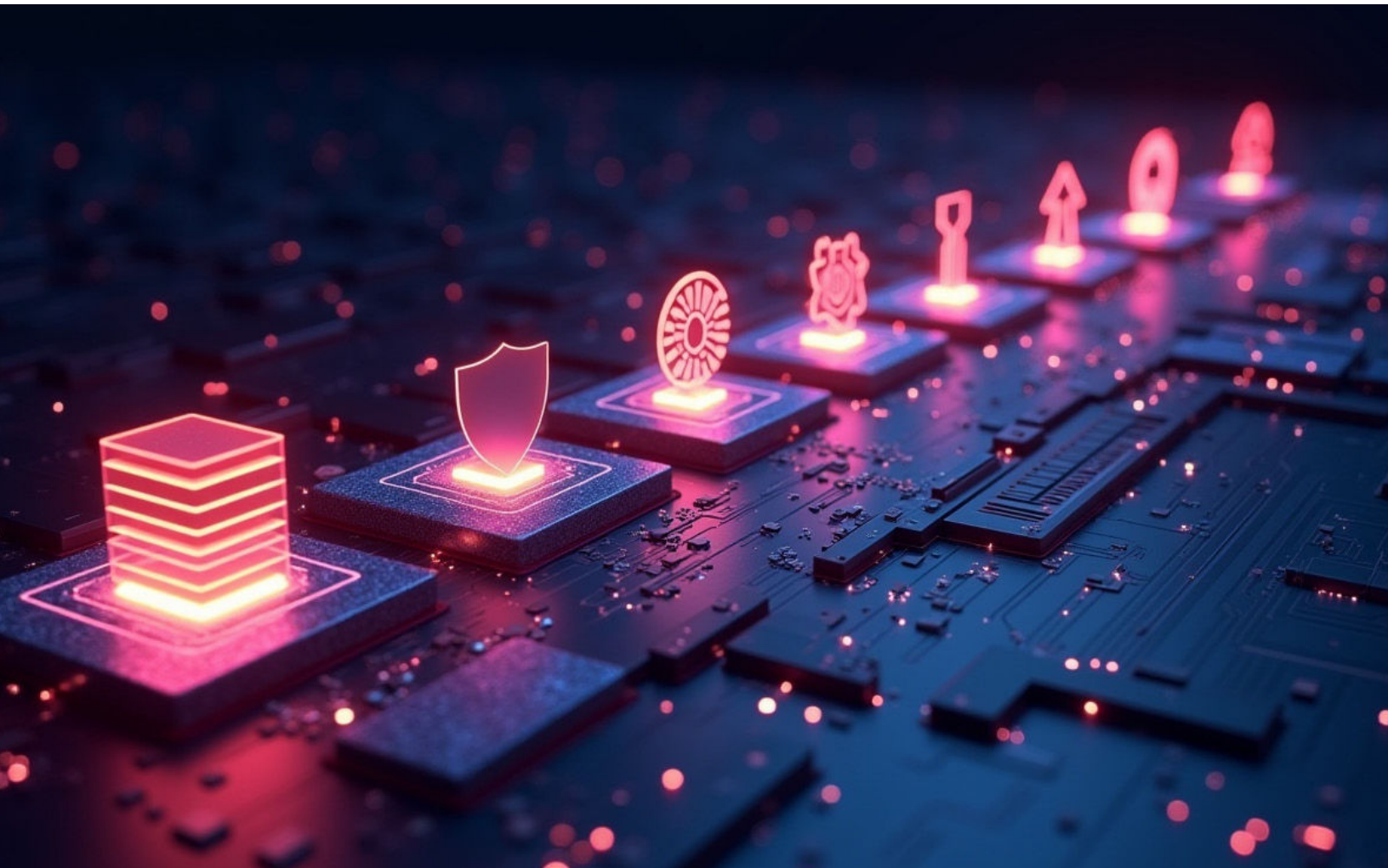
OpenShift Virtualization offers a low-risk pathway to modernization by supporting heritage applications while enabling the gradual adoption of containers and cloud-native technologies. This approach allows organizations to leverage existing investments while positioning themselves for future growth opportunities.

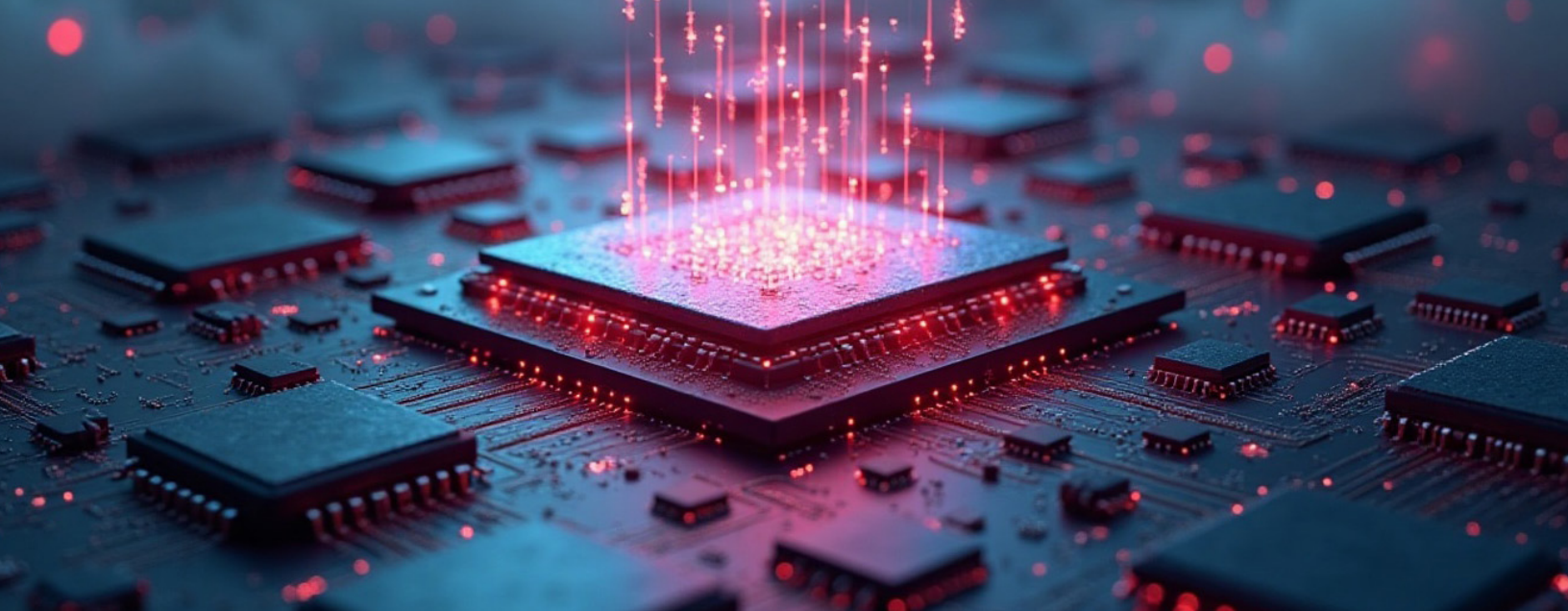
6. Automation and Day-Two Operations

Integration with the Ansible Automation Platform allows for automated processes, which further enhance operational efficiency. Automation not only simplifies the migration process but also supports ongoing management and scalability as organizations grow.

7. Support for Future Technologies (AI/ML, Edge Computing)

With built-in support for AI/ML workloads and edge computing, OpenShift Virtualization supports innovation and scale by providing the upfront flexibility needed to adopt emerging technologies.





Market Challenges

Organizations today face critical market challenges, headlined by significant disruptions in the virtualization landscape and the ongoing complexities of managing hybrid and multi-cloud environments. These pressures necessitate a shift from legacy systems and create opportunities for modern, unified platforms.

Virtualization Disruption and Opportunity

The virtualization market is experiencing significant upheaval. Recent changes in product pricing, packaging, and licensing from long-standing vendors are creating uncertainty and compelling organizations to urgently re-evaluate their virtualization strategies. This disruption, however, also presents a clear opportunity. As businesses look for alternatives, the Red Hat OpenShift platform, with its integrated OpenShift Virtualization function, offers a trusted modern solution for managing VMs. Beyond simply replacing traditional hypervisors, OpenShift extends its capabilities to embrace containers, Kubernetes for scalability and workload management, automation, infrastructure-as-code, and DevOps development workflows. This allows organizations to not only address immediate virtualization needs but also to make platform decisions that enable future application modernization, cloud-native applications, and the evolving demands of AI workloads.

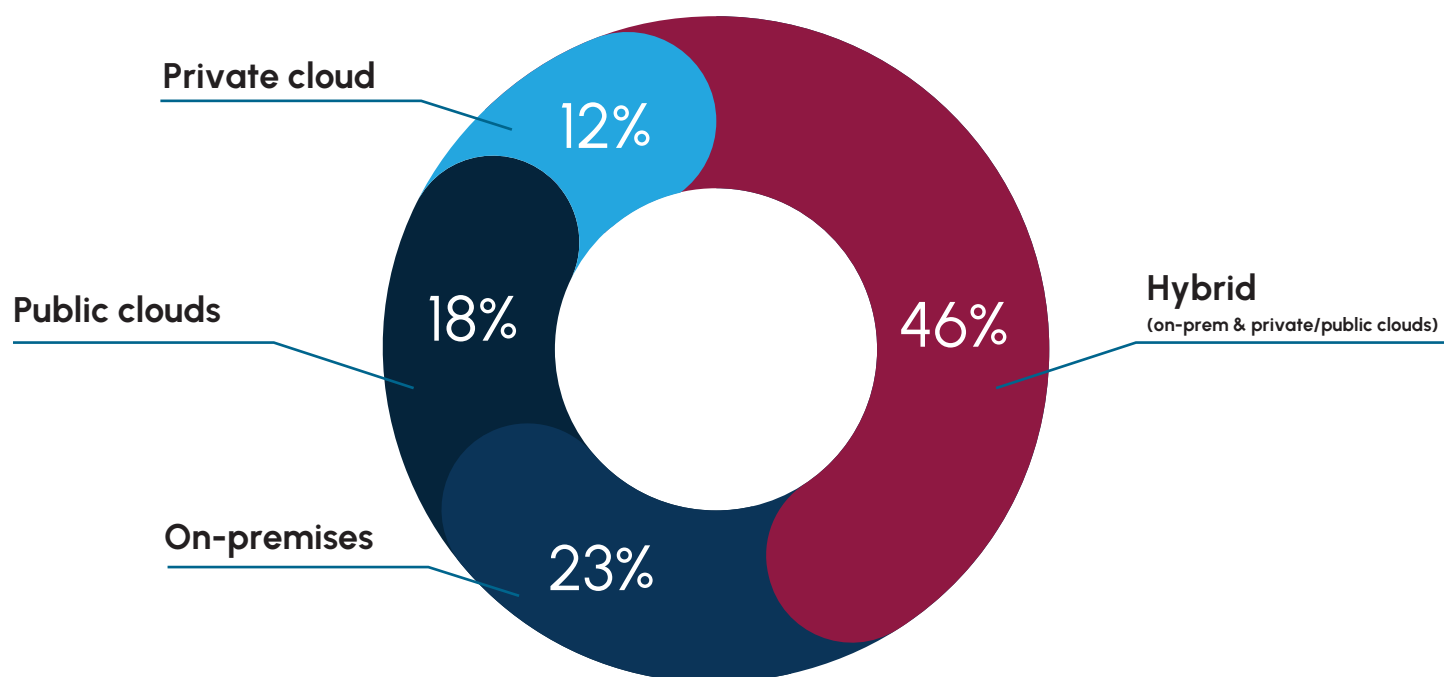
Cloud Adoption Opportunity

The drive for greater agility, scalability, and cost savings continues to fuel cloud adoption. Futurum Research's decision-maker study found that nearly half of organizations operate in mixed environments of public and private clouds, and on-premises. This highlights a strong trend towards hybrid and multi-cloud strategies, as businesses seek to optimize workloads across various providers and leverage the unique strengths of each.

However, managing workloads across multiple clouds introduces significant complexity, particularly around governance, security, data management, and operational consistency. Maintaining clear visibility and control over all workloads becomes paramount.

Red Hat OpenShift, with its OpenShift Virtualization capability, directly addresses this by enabling IT teams to manage both VMs and containers consistently, regardless of their location—on-premises, at the edge, or in any major cloud. OpenShift Virtualization is available across Red Hat's self-managed and fully managed OpenShift offerings, including Microsoft Azure Red Hat OpenShift, Red Hat OpenShift Service on AWS, Red Hat OpenShift Dedicated on Google Cloud, Red Hat OpenShift on IBM Cloud, and Oracle Cloud Infrastructure.

Figure 1: 2025 Enterprise Applications - Deployment Environments



Source: Futurum Intelligence IQ, 2025 Enterprise Applications Decision-Maker Survey

Unified Architecture

The increasing complexity of hybrid and multi-cloud environments underscores the need for a unified architecture. Simplifying the management of both VMs and containers through a single, consistent platform is key to overcoming operational challenges. Red Hat OpenShift provides this unified platform, with a single management console and set of processes, allowing IT teams to manage diverse workloads efficiently. This reduces the operational burden on IT teams and ensures consistent processes and policies across the entire environment. A unified approach can simplify the day-to-day management and further support the breakdown of silos between development, operations, and platform engineering teams to further support operational efficiency.

Migration and Refactoring

Modernizing heritage applications for cloud-native architectures remains a primary challenge. These applications often require extensive, costly, and time-consuming refactoring to operate effectively in modern cloud environments. Red Hat OpenShift offers a low-risk, phased approach to modernization. Organizations can initially migrate their existing VMs, managed by OpenShift Virtualization, onto the OpenShift platform using the OpenShift Migration Toolkit for Virtualization (MTV). This secures existing investments and stabilizes operations on a modern foundation. From there, the platform provides extensive support for both these VMs and, as part of the broader OpenShift platform, for any new containerized applications, along with a comprehensive set of developer tools and services. This allows businesses to modernize at their own pace, refactoring or rebuilding applications as business needs dictate. Red Hat Ansible Automation Platform further streamlines both the initial migration and ongoing operations by automating tasks and changes across VMs and containerized workloads consistently and securely.



OpenShift Virtualization Strategy

The Red Hat OpenShift strategy for virtualization centers on providing organizations with a flexible, secure, and cost-effective path to migrate and manage their current VM estates while future-proofing their infrastructure for modernization. This strategy directly addresses key challenges identified by Futurum Research:

According to The Futurum Group's research, security remains a top concern for 71% of organizations that are adopting hybrid cloud environments. OpenShift offers advantages in security with enterprise-grade features, including protection for both VMs and containers. This enhanced security enables IT teams to manage workloads across environments while safeguarding against threats.

Beyond security, OpenShift supports developer productivity by integrating self-service provisioning and CI/CD pipelines. The Futurum Group's research further shows that developer productivity is directly related to faster time-to-market, with 65% of organizations surveyed noting speed as a competitive advantage. By providing the tools to allow developers to quickly provision and manage their environments, OpenShift can reduce or eliminate bottlenecks that free up time for innovation.

The third most critical challenge organizations claim is managing costs with data, showing that 68% of organizations cite cost optimization as a major factor in IT decision-making. OpenShift seeks to address this challenge by managing resource allocation across hybrid environments. This enables organizations to reduce operational expenses, all while maximizing ROI through modernization efforts. OpenShift Virtualization Engine also provides a cost-effective alternative compared to other virtualization platforms.

Exploring Opportunities and Use Cases for OpenShift Virtualization

The flexibility offered by OpenShift Virtualization creates opportunities across multiple markets. By allowing organizations to start with dedicated VM hosting via OpenShift Virtualization Engine or move directly to a unified platform for VMs and containers, OpenShift addresses the unique challenges of markets that manage large-scale, mission-critical workloads and require smooth operational transitions with high-security standards. The Futurum Group's research shows that industries such as financial services, telecommunications, and healthcare are well-positioned to benefit from hybrid cloud adoption.

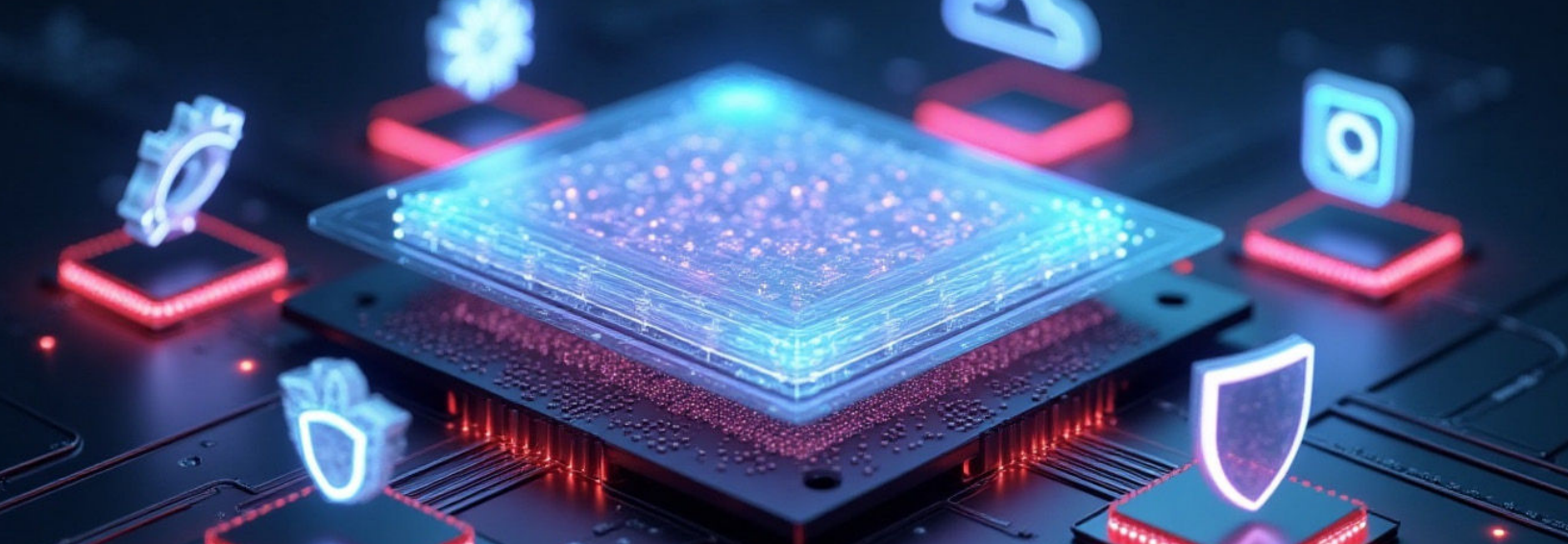
and modernization efforts since these markets tend to manage large-scale, mission-critical workloads that require smooth operational transitions and high-security standards.

- **Financial Services:** Financial institutions can leverage OpenShift Virtualization to modernize their heritage infrastructure while maintaining compliance and adherence to the regulatory requirements of their industry. By running VMs and containers on a unified platform, financial organizations can optimize resource utilization and improve service delivery.
- **Telecommunications:** With the rise of 5G and edge computing, telecommunications companies need platforms that can support hefty amounts of data while providing real-time processing capabilities. OpenShift Virtualization's support for edge computing and AI/ML workloads allows telcos to deploy scalable solutions at the edge.
- **Healthcare:** The healthcare sector faces unique challenges in managing both heritage applications and modern cloud-native solutions due to regulatory requirements and the confidential nature of patient data. OpenShift Virtualization provides healthcare organizations with the flexibility to modernize their IT infrastructure while ensuring data security, compliance, and operational reliability.

Evaluating the Partner Ecosystem: GSI and ISV Partner Collaboration

Aside from the technology itself, OpenShift Virtualization's strength can be attributed to its extensive partner ecosystem. The Futurum Group found that partner-led services are key to driving adoption, with 62% of organizations relying on external expertise to manage hybrid cloud environments.

- **GSI Partners:** Global System Integrators (GSIs), such as Accenture and Deloitte, play a critical role in helping organizations implement OpenShift Virtualization by offering migration services, customization, and support for scaling operations across environments. These partners provide expertise in developing tailored solutions that meet the needs of each organization.
- **ISV Partners:** Independent Software Vendors (ISVs) contribute by building complementary software solutions that integrate with OpenShift Virtualization by extending the platform's capabilities in areas such as disaster recovery, networking, and storage. This collaboration ensures that organizations can leverage a broad range of trusted third-party tools within their OpenShift environment, addressing specific operational needs and accelerating their journey towards a modernized, cloud-native architecture.

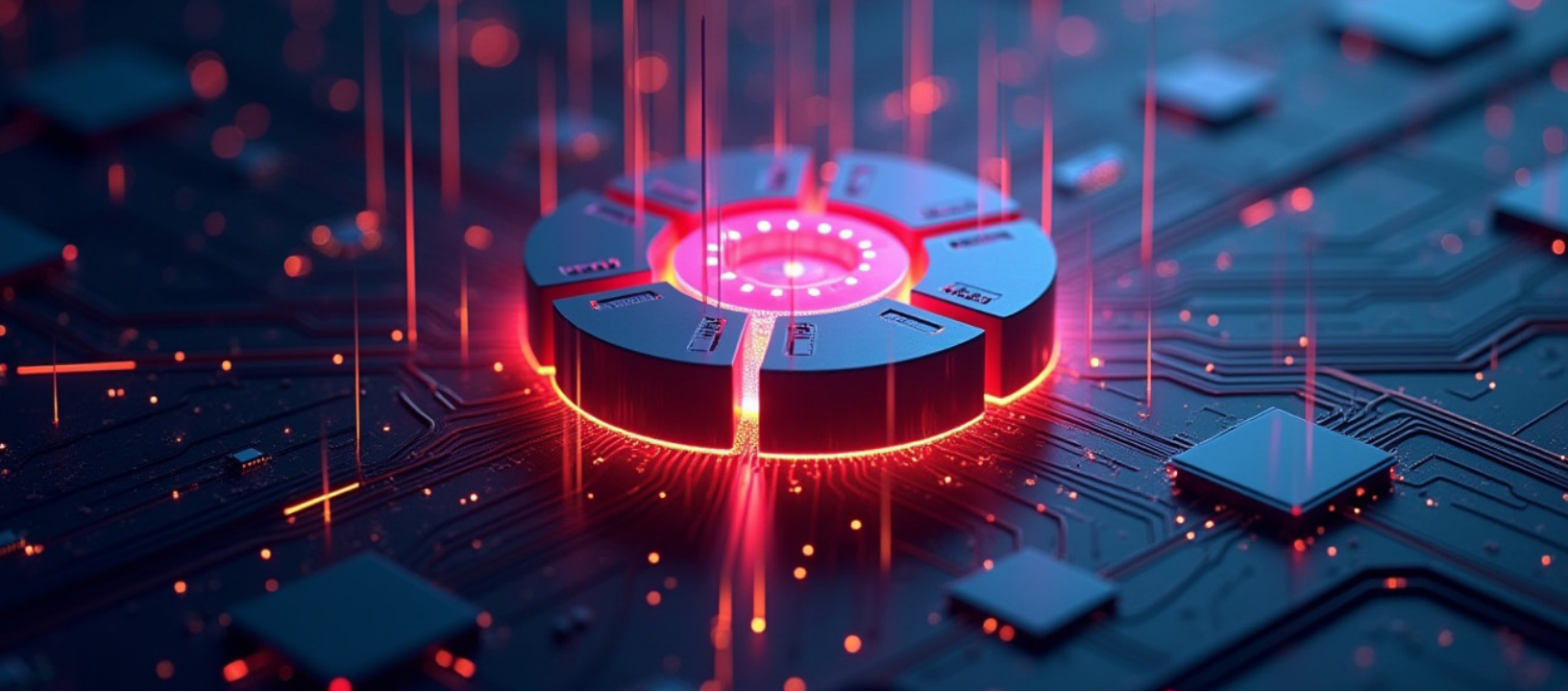


Analyst Response and Takeaways

Red Hat OpenShift, with its OpenShift Virtualization capability, presents a compelling solution for organizations navigating the complexities of VM migration, hybrid cloud management, and application modernization. Whether starting with the cost-effective OpenShift Virtualization Engine for dedicated VM hosting or leveraging the full platform's capabilities, Red Hat OpenShift aims to help organizations address their immediate migration challenges and offers a clear path for adopting new applications and deployment models. This approach improves operational efficiency and developer productivity. Supported by an extensive partner ecosystem and Red Hat's broader portfolio, OpenShift provides the tools and flexibility needed to migrate VMs confidently while optimizing cloud strategies and accelerating innovation.

Key takeaways for organizations considering OpenShift Virtualization include:

- **Simplified VM Migration to a Modern Platform:** Organizations can easily migrate their existing VMs with migration tooling that is already included with MTV. Red Hat Ansible Automation Platform also adds further efficiency for large-scale migrations.
- **Unified Cloud Management:** OpenShift Virtualization provides a consistent operational experience across on-premises, cloud, and edge environments while reducing complexity and enabling smooth transitions to modern architectures.
- **Accelerated Modernization:** By supporting both VMs and containers on a single platform, OpenShift Virtualization allows organizations the ability to modernize at their own pace which reduces the risks and costs associated with large-scale migrations.
- **Increased Developer Productivity:** Self-service provisioning and integrated CI/CD tools help developers manage their environments, which results in faster development cycles and improved time-to-market.
- **Comprehensive Support and Expertise:** Red Hat's world class support services and partner ecosystem ensures that organizations have access to the expertise and solutions needed to maximize the value of their investment, from initial VM migration to advanced modernization.
- **Future-Proof Innovation:** With built-in support for AI/ML and edge computing, OpenShift provides a flexible foundation for future growth by allowing organizations to remain competitive with emerging trends and technologies.



Conclusion

The current shifts in the virtualization market demand a strategic response from organizations seeking stability, cost control, and a path to future innovation. Red Hat OpenShift provides this strategic direction, offering a comprehensive platform designed to meet both immediate virtualization challenges and long-term modernization objectives.

At the core of this offering is customer choice. Organizations can begin by addressing urgent VM migration and hosting needs with the cost-effective OpenShift Virtualization Engine. When ready, they have a non-disruptive upgrade path to the full Red Hat OpenShift platform, leveraging the integrated OpenShift Virtualization function to unify VM and container management. This empowers businesses to control their modernization journey, adopting new capabilities as their requirements dictate.

This flexible approach delivers tangible benefits: simplified operations across hybrid cloud settings, optimized IT costs, robust security for all workloads, and increased developer productivity. It establishes a solid foundation for adopting advanced technologies like AI/ML and edge computing, ensuring organizations are prepared for future demands.

Built on a foundation of open-source innovation and backed by Red Hat's extensive expertise and a strong partner ecosystem, OpenShift offers a resilient and adaptable solution. As organizations chart their course through today's complex IT conditions, evaluating Red Hat OpenShift provides a clear opportunity to build a future-ready infrastructure tailored to their unique goals.

Important Information About This Report

AUTHORS

Mitch Ashley

Vice President & Practice Lead, DevOps
& Application Development | The Futurum Group

PUBLISHER

Daniel Newman

CEO | The Futurum Group

INQUIRIES

Contact us if you would like to discuss this report and The Futurum Group will respond promptly.

CITATIONS

This paper can be cited by accredited press and analysts, but must be cited in context, displaying author's name, author's title, and "The Futurum Group." Non-press and non-analysts must receive prior written permission by The Futurum Group for any citations.

LICENSING

This document, including any supporting materials, is owned by The Futurum Group. This publication may not be reproduced, distributed, or shared in any form without the prior written permission of The Futurum Group.

DISCLOSURES

The Futurum Group provides research, analysis, advising, and consulting to many high-tech companies, including those mentioned in this paper. No employees at the firm hold any equity positions with any companies cited in this document.



ABOUT RED HAT, Inc.

Red Hat is the open hybrid cloud technology leader, delivering a trusted, consistent and comprehensive foundation for transformative IT innovation and AI applications. Its portfolio of cloud, developer, AI, Linux, automation and application platform technologies enables any application, anywhere—from the datacenter to the edge. As the world's leading provider of enterprise open source software solutions, Red Hat invests in open ecosystems and communities to solve tomorrow's IT challenges. Collaborating with partners and customers, Red Hat helps them build, connect, automate, secure and manage their IT environments, supported by consulting services and [award-winning](#) training and certification offerings.

Futurum

ABOUT THE FUTURUM GROUP

The Futurum Group is an independent research, analysis, and advisory firm, focused on digital innovation and market-disrupting technologies and trends. Every day our analysts, researchers, and advisors help business leaders from around the world anticipate tectonic shifts in their industries and leverage disruptive innovation to either gain or maintain a competitive advantage in their markets.

Futurum

CONTACT INFORMATION: The Futurum Group LLC | futurumgroup.com | (833) 722-5337