Microsoft Azure Red Hat OpenShift Provides More Value And Support To Cloud-First Organizations

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Cloud nativity is emerging as a business requirement across many industries for a number of reasons. The increased need to deploy and run apps in the cloud has demanded more automation, applications require scalability, and software stability is becoming increasingly important. The intersection of cloud and containerization creates a unique opportunity for increased business agility as cloud infrastructure supports development and deployment of containerized applications at scale.

However, many organizations want to curate their Kubernetes stack according to their specific needs. By consuming a multicloud container application platform as a managed service on a public cloud, organizations can reduce the complexity associated with projects, allowing them to focus on innovation efforts.[1]

Azure Red Hat OpenShift brings a jointly managed comprehensive application platform to a leading public cloud, Microsoft Azure. With Azure Red Hat OpenShift, organizations can bring containerized applications into workflows where they exist, while mitigating many of the inherent complexities of container management. Furthermore, it simplifies application development and deployment; Red Hat and Microsoft manage the infrastructure and integrated tooling, empowering business users to focus solely on application development and business growth.

To better understand the benefits, costs, and risks associated with Red Hat OpenShift cloud services, Red Hat commissioned Forrester Consulting to interview 11 customers and conduct a Total

Reduction in infrastructure management effort
50%

Reduction in development time
65%

Economic Impact™ (TEI) study.[2] This abstract will focus on the use of Azure Red Hat OpenShift and its value to organizations.

INVESTMENT DRIVERS

Prior to Azure Red Hat OpenShift, the interviewees' organizations struggled with common challenges:

- **Complexity of solutions.** Interviewees shared that while they wanted to employ microservices, they worried that it would require significant resources in implementation and integration. The head of cloud-native transformation at a financial organization explained: "We looked at some competitors [to Red Hat], but we did not want to marry a cloud vendor and they were not good enough to ignore that constraint. They didn't come with the batteries included and that is specifically what we were looking for because besides not being an infrastructure company, we're also not a cloud platform company."

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- **Limited time and budget.** Interviewees noted that the operational overhead to maintain and upgrade their organizations' prior monolithic architectures was too costly and time-consuming. Interviewees also said that having to dedicate developer time to platform and resource management resulted in missed opportunities for higher-value innovation and delivery of new technologies that would drive business forward.

- **Lack of flexibility and scalability.** Interviewees described looking for a solution that could adapt to their organizations' specific business needs and change over time, which were qualities that their incumbent systems lacked. The head of cloud-native transformation at a financial organization described the restricted nature of the prior environment that became yet another obstacle to innovation: "Comparing Red Hat OpenShift to our old environment is apples to oranges. In the old environment, [we] restricted everything. Now suddenly engineers have freedom of choice [in their tools], and that in itself is extremely valuable in building better architecture."

AZURE RED HAT OPENSHIFT FEATURES

Interviewees found the following attributes of Azure Red Hat OpenShift to be particularly beneficial for their organizations:

- **Comprehensive application platform.** Azure Red Hat OpenShift integrates DevOps services and tooling, such as runtimes, build tools, pipelines, monitoring, service mesh, and more. Developers can start projects quickly and focus on their code. The platform supports a range of traditional, cloud-native, and serverless tools, enabling users to connect their applications to hundreds of Azure services easily. A container platform solutions architect at an energy organization cited the ability to use Azure tools integrated with Azure Red Hat OpenShift as a huge benefit to developers as they were often

already familiar with the tools and felt more confident using them to embark on new innovative projects.

- **Consistent experience across the hybrid cloud.** Red Hat OpenShift provides a consistent infrastructure and application experience regardless of deployment location. Azure Red Hat OpenShift offers users proactive guidance and guardrails across their Azure environment. This facilitates easier scaling and simplifies the ability to shift workloads to Azure with business needs.

- **Fully managed and supported.** To alleviate the day-to-day maintenance, upgrades, and security concerns from the organization, a specialized global Site Reliability Engineering (SRE) team oversees the entire stack, managing everything from infrastructure to daily operations. Automated provisioning and preconfigured tools streamline the deployment of applications, reducing time and complexity and enabling organizations to focus on essential business needs. Azure Red Hat OpenShift features industry-leading 99.95% availability and 24/7 support from both Red Hat and Microsoft. The head of cloud-native transformation at a financial organization shared that because of the management support, they reduced required operational FTEs by 30%. They added: "Our out-of-pocket costs when you compare vendor to vendor is similar to our prior state. However, today, we get way more for what we pay for and it's reflected in the resource impact from not having to do the management, the batching, the security processes ourselves."

- **Enterprise-grade operations, security, and compliance.** The specialized global SRE team manages the full stack, reducing operational complexity, increasing speed to market, and allowing organizations to focus on business-critical needs. The head of cloud-native transformation at a financial organization credited

Azure Red Hat OpenShift for improving security posture by having baked-in, role-based access control, which was not the case for other competitive Kubernetes vendors.

> **"The strong operator ecosystem is very valuable, and it's very valuable to us in several domains, including monitoring, logging, and networking."**
>
> *Head of cloud-native transformation, financial*

KEY RESULTS

The following results are based on a composite organization as modeled in the full study.

Increased development velocity. Before investing in Azure Red Hat OpenShift, some interviewees' organizations used containers, but most used a microservices-based architecture; applications were large, burdensome, and expensive to manage. Interviewees shared that implementing Azure Red Hat OpenShift's microservices- and container-based architecture allowed their organizations' application development and testing process to be much faster, which opened time in their developers' day that could be recouped for further productivity.

- **Development time reduced by 70%.** Using Azure Red Hat OpenShift provides access to integrated tools and continuous integration/ continuous delivery (CI/CD) pipelines that help modernize development approaches and streamline application development and deployment. Such features lend themselves to a 60% reduction in development time for the composite organization in Year 1, 65% in Year 2, and 70% in Year 3. The head of cloud-native transformation at a financial organization saw

improved development velocity for greenfield development initiatives from faster lead times and less burdensome handoffs between teams. They stated, "We can give our engineers a lot of autonomy thanks to the guardrails available in Red Hat OpenShift and we have automated a lot of the human handoffs required between teams which has saved weeks on lead time delays."

> **"It takes 5 minutes to spin up a test environment now, where it could have been a ticket to the operations team and a two-week wait before [Red Hat OpenShift]."**
>
> *Head of cloud-native transformation, financial*

Streamlined application delivery management. Beyond slowing down the development process, legacy environments also required developers to procure new environments manually, which could take weeks and involve multiple stakeholders. With Azure Red Hat OpenShift, Microsoft and Red Hat manage all aspects of the cloud-based container environment. As a result, developers no longer needed to allocate time for infrastructure maintenance and management, and were able to repurpose that time for more productive work supporting application development.

- **Developers recouped 20% of their time.** In their previous environment, interviewees noted that infrastructure maintenance work could consume as much as 20% of a developer's time. Using Azure Red Hat OpenShift effectively gave back that time to the development team. Interviewees attributed some of that productivity gain to the value of interacting with Red Hat SRE's, who proactively manage the platform.

The head of cloud-native transformation at a financial organization credited this recouped developer time for avoiding the need to double the size of their platform teams despite a higher volume of requests from engineers.

The IT innovation manager in nonprofit education also pointed out that eliminating these maintenance tasks provided their organization with additional developer time to focus on higher-value, more innovative projects. This, in turn, improved employee engagement and job satisfaction.

> **"The workload has shifted from doing infrastructure maintenance to supporting application development."**
>
> *IT innovation manager, nonprofit education*

- **Infrastructure management effort reduced by 50%.** Using Azure Red Hat OpenShift also allowed interviewees' organizations to repurpose full-time DevOps staff that were responsible for managing the infrastructure. With Azure Red Hat OpenShift, organizations did not have to allocate as many DevOps staff to maintain the environment for application development. Organizations were able to reduce costly downtime and maintain (or even improve) reliability with the managed upgrades, patching, threat monitoring, and remediation provided by Azure Red Hat OpenShift. The container platforms solutions architect at an energy organization told Forrester, "We are now avoiding a couple incidents a year that would impact either our internal employees or external customers."

  The same interviewee found that their organization redirected five FTEs from operational activities such as maintenance windows, and hardware repair, to more customer enablement activities.

Finally, they related that, through the operational productivity improvements, the impacted resources in the organization acquired more transferrable skills.

> **"The skills our [developer] resources have now are more marketable across the enterprise, so we can move resources across teams with ease."**
>
> *Container platforms solutions architect, energy*

TOTAL ECONOMIC IMPACT ANALYSIS

For more information, download the full report "The Total Economic Impact™ Of Red Hat OpenShift Cloud Services," commissioned by Red Hat and delivered by Forrester Consulting on behalf of Red Hat, February 2024.

STUDY FINDINGS

Forrester interviewed 11 decision-makers at organizations with experience using Red Hat OpenShift cloud services and combined the results into a three-year composite organization financial analysis. Risk-adjusted present value (PV) quantified benefits include:

- Improved development velocity worth more than $1.5 million.

- Reduced infrastructure management worth more than $2.1 million.

- Improved operational efficiency worth more than $1.3 million.

Return on investment (ROI)

468%

Net present value (NPV)

$4.08 million

Appendix A: Endnotes

[1] "Getting Started With Kubernetes," Forrester Research, Inc., January 24, 2023.
[2] Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

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