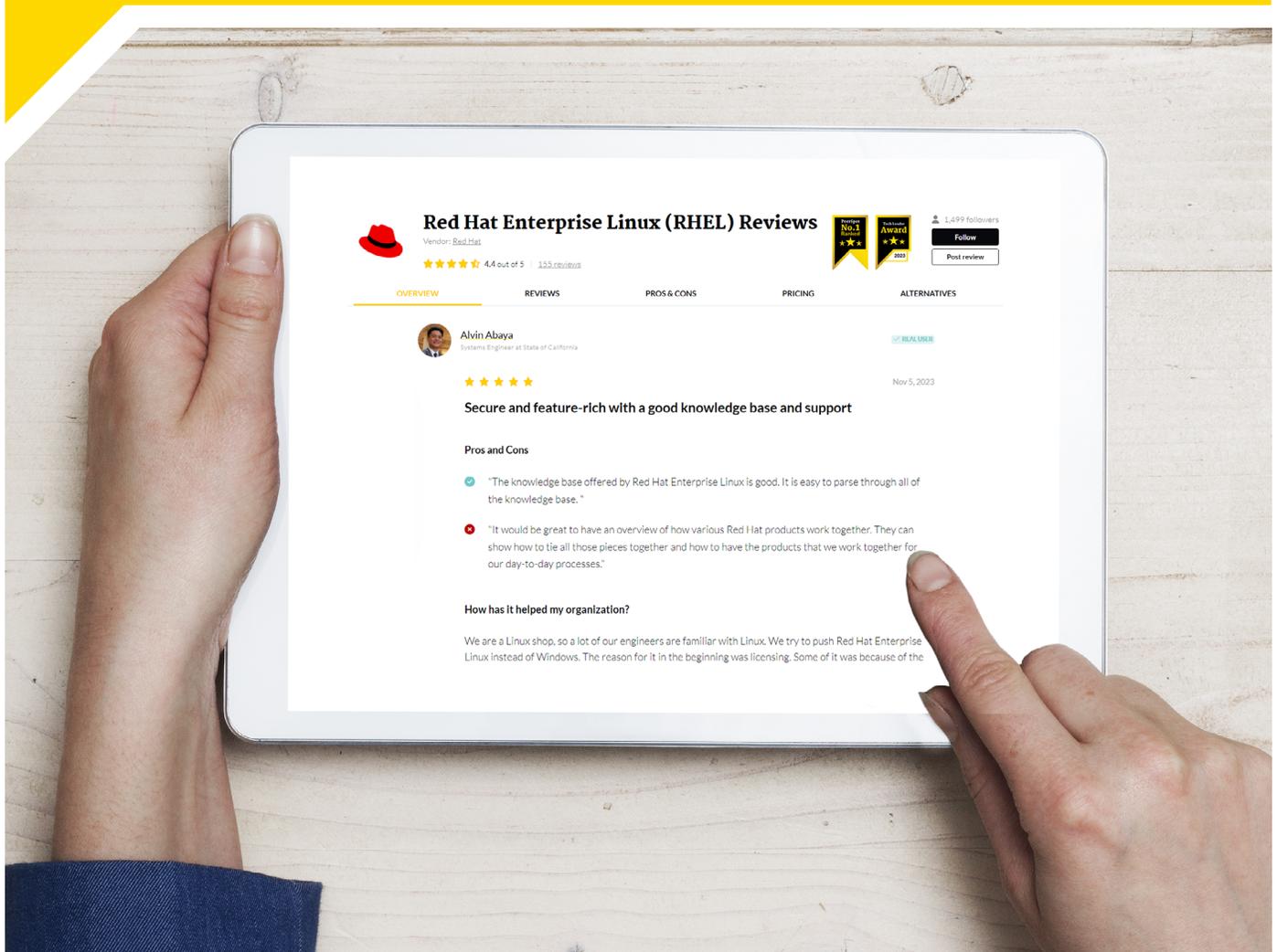


## Red Hat Enterprise Linux in the Cloud

# 7 Key Success Factors for Linux Operating Systems on Microsoft Azure



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# Introduction

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Red Hat Enterprise Linux customers use the operating system (OS) in both on-premises and cloud deployment scenarios. This paper focuses on organizations that rely on Red Hat Enterprise Linux on the Microsoft Azure cloud. It describes seven key success factors for operating systems in the cloud. These include performance, data security, and resilience, along with cost savings. Ease of deployment and ease of moving workloads between clouds and the data center also matter, as does quality of support. As these factors come together, users of Red Hat Enterprise Linux find that the OS enables them to realize their cloud strategies.

# Use Cases on Microsoft Azure

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PeerSpot members are putting Red Hat Enterprise Linux to work on Azure across a variety of use cases. For example, an Engineer at Health E Systems, an insurance company with over 200 employees, uses Red Hat Enterprise Linux on [Azure](#) to support web applications, including Red Hat OpenShift. They had previously used Windows.

A Systems Administrator at Ithaca College, a university with over 1,000 employees, has a [digital footprint on Azure](#) and on-premises that he described as “very fluid.” He said, “We’re always changing and adapting to our environment, based on what the needs of our faculty and students are.”

Ithaca College’s mission-critical workloads on Azure support the backing up of student transcripts, a task which, “Azure does with Red Hat very well.” This user also praised Azure for allowing his organization to “scale very nicely.” He elaborated, saying, “This means that we can scale locally if we need to because we use Hyper-V for our VM [virtual machine] management and we can spin up 10, 15, or however many servers we need, relatively easy with the push of a button, and you can do the same thing in Azure.”

He further commented, “Another thing that is nice is that Azure will scale as we see more users come online. It will automatically spin up Red Hat boxes to accommodate, and then it’ll bring them back down when that surge is over.”



**Don B.**  
Systems Administrator  
at Ithaca College



**“Azure will scale as we see more users come online. It will automatically spin up Red Hat boxes to accommodate, and then it’ll bring them back down when that surge is over.”**

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**Don B.**  
Systems Administrator  
at Ithaca College



**“When using RHEL for tracking or monitoring, they do a very good job with respect to the impact on the performance of existing applications.”**

[Read review »](#)

A Technical Program Manager at a university with over 200 employees uses Red Hat Enterprise Linux for virtual machines, local machines, and the school’s own data center servers. He remarked, “Our existing Azure solutions are being used for different applications. The compatibility for running different containers and versions is not an issue.”

An insurance company with more than 500 employees runs around 20 Red Hat servers, which are distributed across Azure and on-premise, according to their Enterprise Systems Engineer. The servers run web services, with most of the applications accessed by up to 5,000 users.

“The solution is flexible and has great scripting so it can accommodate any conditions,” said the CEO of DataOps Consultancy, a tech services company with over 200 employees. “For one client, we have version 7 installed and managed on a variety of physical servers for different environments including production. For another client, we have VMs. For other use cases, we have a setup of active sites in on-premises with standbys in the Azure cloud.” A Senior System Integration Engineer at SVA System Vertrieb Alexander GmbH, a software company with over 1,000 employees, similarly deployed Red Hat Enterprise Linux on-prem and in the cloud as “a fallback.”

# 7 Key Success Factors for Linux Operating Systems on Microsoft Azure

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What does it take to achieve success with operating systems on Azure? According to PeerSpot members, there are seven key success factors. These include performance, data security, and resilience. System owners want an operating system to contribute to cost savings, as well. Ease of moving workloads between the cloud and data center matters, too, as do quality of support and ease of deployment.

## #1 - Performance

A Linux OS should enable strong system performance in the cloud. As Ithaca College's Systems Administrator put it, "When using RHEL for tracking or monitoring, they do a very good job with respect to the impact on the performance of existing applications." Their front-end web services run on Red Hat Enterprise Linux. The college's Oracle databases sit on Red Hat 7.

"The application always worked beautifully, and the performance was excellent," said the CTO at Standard Bank International, a small financial services firm. For context, he explained that his team developed a proof of concept and "ran a mirror of production and development to demonstrate the improvements in OpEx and performance." He added, "Getting it up and running in parallel was the key to getting it all to work correctly, and it was instrumental in convincing any dissenting voices of the value."



**Excellent System Performance**



Prateek A.

Technical Program Manager at a university with 201-500 employees



**“As an open-source operating system, there are many fewer data and cyber-attacks than with the Windows operating system, due to the existence of the .exe files in Windows. Linux-based operating systems from Red Hat are known best for security.”**

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**Cloud Data Security**

## #2 - Data Security in the Cloud

Data security in the cloud is a non-negotiable requirement. Ithaca College’s Systems Administrator spoke to this need when he praised Red Hat Enterprise Linux for security updates that “are done very well, so I feel confident that I’m not going to get hit with ransomware or a similar problem.”

The university’s Technical Program Manager concurred, saying, “Data security is the prime, constant concern for us. Security is a big challenge for us, and we want all of our data secured in every way possible.”

He went on to explain that, in their hybrid cloud environment, they have application data that requires high security, including personal identity, demographic, and health information. For him, Red Hat Enterprise Linux offers inherent security because, as he said, “As an open-source operating system, there are many fewer data and cyber-attacks than with the Windows operating system, due to the existence of the .exe files in Windows. Linux-based operating systems from Red Hat are known best for security.”

He then commented, “The most valuable feature is its security. In Windows, there are risks of attacks or of data leaks because it is using .exe files, but in Red Hat’s Linux-based operating system, the data is more secure. Security notifications and alerts are built-in in Red Hat. It simplifies the notification, and you can clearly understand the description and how you can minimize such alerts. That is helpful for us.”

## #3 - Resiliency

Organizations often choose cloud deployments because the remote, separate nature of cloud architecture helps with IT resiliency. However, the OS itself must also support resiliency requirements in the cloud. A UNIX/Intel/ARM Manager at a financial services firm with over 10,000 employees characterized the issue by saying, “When it comes to resilience in terms of disaster recovery, the operating system is robust. If it fails, it’s probably an app issue.” He continued, “In terms of the ecosystem for managing our Linux environment, using Red Hat Satellite and so on has been very good.”

Other comments about the resiliency qualities of Red Hat Enterprise Linux on Azure included:

- “The solution’s resiliency is pretty solid.” - A Senior Systems/Automation Engineer at a financial services firm
- “Red Hat Enterprise Linux is extremely resilient because it is much more secure.” - Engineer at Health E Systems
- “The resiliency of Red Hat Enterprise Linux is quite good.” - Architect a small tech company



Matt H.  
Engineer at Health  
E Systems



“Easier to manage  
because it can scale to  
a large amount and be  
managed across many  
platforms.”

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**Saves on  
Costs**

## **#4 - Cost Savings**

As the tech company's Architect explained, "It [Red Hat Enterprise Linux] has saved costs for our customers because it's a stable operating system, and they have no problem with security, patching, and so on. It works everywhere without any issues, so the development of the applications is not impacted by the system."

At Health E Systems, cost savings became possible because Red Hat Enterprise Linux was "easier to manage because it can scale to a large amount and be managed across many platforms," according to their Engineer.



**Portability for  
Moving Workloads**

## **#5 - Ease of Moving Workloads Between the Cloud and the Data Center**

As PeerSpot members discussed in their reviews, an operating system should make it easy to move workloads between the cloud and the data center. The financial services UNIX/Intel/ARM Manager, referred to this as "portability for workloads." He explained that OS has enabled them to adopt containers and automate processes that help them move workloads where they are needed.

A Cloud Engineer at an energy/utilities company with over 10,000 employees spoke to the need for workload portability as well, explaining how his team chose Azure to migrate existing physical machines to the cloud “until we can fully modernize them,” as he put it. He added, “Overall, it’s manageable for us to move workloads between the cloud and on-premises or data center environments using Red Hat Enterprise Linux.”

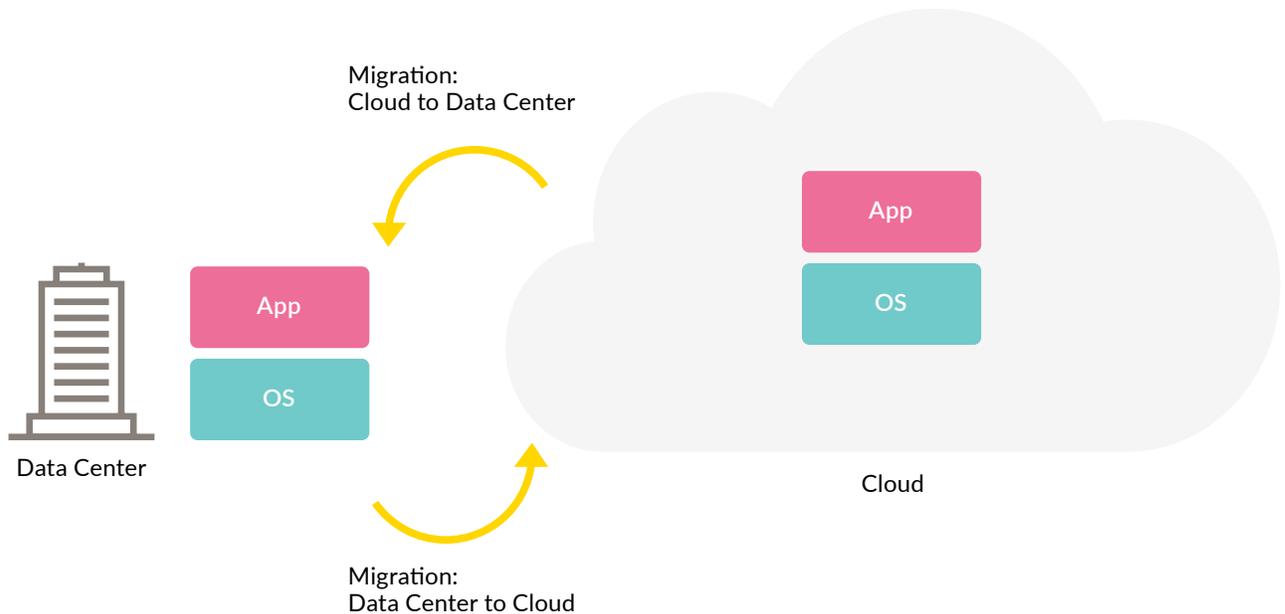


**Cloud Engineer**  
at a energy/utilities company  
with 10,001+ employees



**“Overall, it’s  
manageable for us  
to move workloads  
between the cloud and  
on-premises or data  
center environments  
using Red Hat  
Enterprise Linux.”**

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Cloud to data center migration of workloads.



Architect  
at a tech company with  
11-50 employees



**“It’s one of the best support [services] in the IT world for a product because you always get a response for every bug or issue.”**

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“It isn’t difficult for our customers to move workloads between the cloud and the data center using Red Hat Enterprise Linux,” said the tech company’s Architect. He added, “The integration from on-prem to the cloud is quite easy because the operating system is the same. The operating system works the same in both places, so it’s easy.”

Being able to migrate workloads between cloud and data center also helps with avoiding cloud vendor lock-in, a risk that concerns most IT managers. As the tech company’s Architect shared, Red Hat Enterprise Linux “has helped our customers avoid cloud vendor lock-in because they didn’t need to buy a specific subscription from a cloud vendor or use a specific operating system from a cloud vendor and change the code of their application in relation to that.” He then commented, “It’s important to have a solution that avoids cloud vendor lock-in because they can move freely from one system to another system without any issues.”

The utility’s Cloud Engineer concurred, saying, “It is important to our organization to have a solution that avoids cloud vendor lock-in. We just don’t want to be locked into just one side or the other. We want to have the flexibility and availability to explore other options.”

## #6 – Quality of Support

While the cloud is not new, it is a recent enough addition to the IT landscape that vendor support for an OS is imperative for success. Ithaca College's Systems Administrator put it this way: "With respect to disaster recovery, Azure and Red Hat are probably one of the best pairings that you can get. It provides a lot of redundancy, it's easy to deploy, and the server support is excellent with Azure."

"Their support is good," said the tech company's Architect. "It's one of the best support [services] in the IT world for a product because you always get a response for every bug or issue." The financial services firm's UNIX/Intel/ARM Manager was pleased with the Red Hat Enterprise Linux knowledge base, which he described as "great." He said, "There are lots of times when we don't even have to open a support case because we find what we're looking for."

This user expressed further admiration for Red Hat's support, saying, "I've spent a lot of time with the Red Hat account team over the past nine months. They've helped me understand the products. They've helped develop the skills of my team. They've helped us with technology conversations with other parts of my organization. They've been hugely supportive of the technology conversation we're having with other parts of the bank. They've been over and above the expectations in most cases."



### Quality Support



**Trevor O.**  
Enterprise Systems Engineer  
at a insurance company with  
501-1,000 employees



**“Deploying Red Hat would be quite easy even for a beginner system administrator because it guides you during the deployment.”**

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## #7 – Ease of Deployment

Red Hat Enterprise Linux users on Azure expect the OS to deploy easily. For Ithaca College’s Systems Administrator, this idea applies to all of the school’s backend tools that build its infrastructure. “Red Hat really does a good job to make it easy to deploy those consistently, securely, and upgrade them in the same way,” he said, adding, “[Red Hat] Satellite makes it quick and easy to deploy, and it is also easy to automate the process.”

“The deployment is quite easy,” said the insurance company’s Enterprise Systems Engineer. As the person who does most of his company’s deployments, he rated Red Hat Enterprise Linux an eight out of ten in terms of the ease of deployment. He then said, “Deploying Red Hat would be quite easy even for a beginner system administrator because it guides you during the deployment. It asks you whether you want to use a feature or what features you want to install alongside the operating system. Do you want a file server, or do you want a web server? The installation is quite straightforward and simple.”

# Conclusion

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When a Linux OS is effective in the cloud, that is the result of seven key success factors. As users of Red Hat Enterprise Linux on Azure described on PeerSpot, the OS must deliver strong performance and cost savings. It must provide data security and enable resilience. Furthermore, an OS in the cloud should be easy to deploy, facilitating ease of movement for workloads between the cloud and the data center. Vendor support is essential, too. When these factors coalesce, the OS will provide the functionality that IT managers need in the cloud.

# About PeerSpot

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PeerSpot is the authority on enterprise technology buying intelligence. As the world's fastest growing review platform designed exclusively for enterprise technology, with over 3.5 million enterprise technology visitors, PeerSpot enables 97 of the Fortune 100 companies in making technology buying decisions. Technology vendors understand the importance of peer reviews and encourage their customers to be part of our community. PeerSpot helps vendors capture and leverage the authentic product feedback in the most comprehensive way, to help buyers when conducting research or making purchase decisions, as well as helping vendors use their voice of customer insights in other educational ways throughout their business.

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# About Red Hat

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