PeerPaper™ Report 2023

7 Key Success Factors for Red Hat Enterprise Linux on AWS

Red Hat Enterprise Linux (RHEL) Reviews

Vendor: Red Hat

★ ★ ★ ★ ½ 4.4 out of 5 | 137 reviews

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OVERVIEW REVIEWS PROS & CONS PRICING ALTERNATIVES

Steven Crain
Director of Cloud Security at an insurance company with 10,001+ employees

✓ REAL USER

★ ★ ★ ★ ★

Nov 3, 2023

Has secure defaults and nice integrations for security and vulnerability scanning

Pros and Cons

✓ "There are some nice integrations with scanning for vulnerabilities. That is the feature I have enjoyed the most because I am a security person, and that is my bread and butter."

✗ "The only issue we have had with it is around the SELinux configuration because the way Ansible installs, it sticks the platform passwords in a flat file. We want that locked down more strongly than what is there currently with SELinux. "

What is our primary use case?

We have Ansible deployed on our Red Hat Enterprise Linux servers. We use it to manage the security of our fleet of Ubuntu virtual machines.

PeerSpot

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Introduction

Red Hat Enterprise Linux is proving to be just as valuable in the cloud as it is on-premises. PeerSpot members are putting the operating system (OS) to work on AWS in a variety of use cases. Many of these users run hybrid-cloud environments.

What drives success for Red Hat Enterprise Linux on AWS? In this paper, users share seven key success factors for this Linux Distribution on AWS. What matters are the ease of moving workloads between the cloud and the data center, performance, data security, and resilience. Cost savings count, too, as do ease of deployment and support. Users find, as these factors come together, that the OS enables them to realize their cloud strategies.

Red Hat Enterprise Linux customers have options when it comes to acquiring the OS. Some buy the software from Red Hat and move it to the cloud with Red Hat Cloud Access. Others, like a Transformation Management Office staffer at a tech services company with over 10,000 employees, purchase Red Hat Enterprise Linux <u>via</u> the <u>AWS Marketplace</u>.

AWS Use Cases

PeerSpot members are finding many high-impact uses for Red Hat Enterprise Linux on AWS. For instance, a Principal IT Infrastructure Engineer at a Brazilian financial services firm with over 1,000 employees deploys Red Hat Enterprise Linux on-premises and on AWS. They use the OS for web applications like the JBoss data bridge, as well as apps for prevention and loss.

Databases and applications are the AWS use cases for a software company with over 1,000 employees. They use Red Hat Enterprise Linux on AWS for Squid proxy server, NGINX, and Apache. They run multiple services on each server. Their Principal Server Engineer, who works with telcos and banks in Saudi Arabia, uses AWS in a hybrid cloud/on-premises environment. Figure 1 provides context with a simplified reference architecture showing Red Hat Enterprise Linux as part of the AWS cloud stack.

Mike R.
Principal Systems Administrator at a manufacturing company with 1,001-5,000 employees

★★★★⯪

"The most valuable feature is the reliability of Red Hat's support... I can always get a hold of someone when I call, and they always resolve my issue."

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An Architect at a small tech company shared that his team installs Red Hat Enterprise Linux on AWS <u>at the system level</u> for infrastructure projects. "Based on the application requirements, we design, configure, and update the systems," he said. "Our customers use it as a basic operating system on which they deploy applications. They have enterprise application servers such as Tomcat or custom applications that need an operating system."
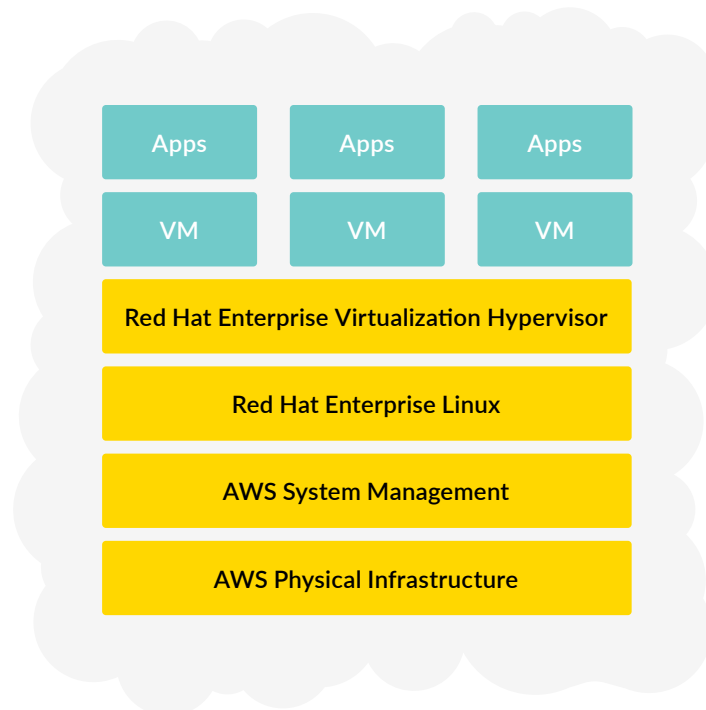

Figure 1 - Simplified reference architecture showing Red Hat Enterprise Linux as part of the AWS cloud stack.

7 Key Success Factors for Red Hat Enterprise Linux on AWS

PeerSpot members share that their key success factors include performance, data security, and resiliency. It's important to be able to save money, too. Users also point to ease of deployment and ease of moving workloads between the cloud and data center.

#1 – Ease of Moving Workloads Between the Cloud and the Data Center

Workloads don't always sit still. For any number of reasons, IT managers may choose to move applications and data between the data center and the cloud—or in the other direction. Figure 2 depicts this process. The easier a Linux distribution makes it to accomplish this task, the more users like it. To this point, the tech services Transformation Management Office staffer said, "Regarding how easy or difficult it is for me to move workloads between the cloud and my data center using the solution, we don't have problems. In general, it's easy."
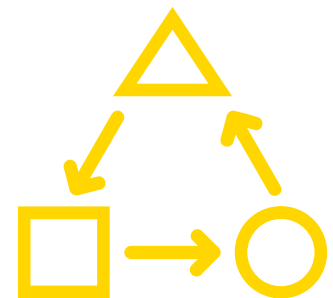
Provides Workload Portability

"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 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." The financial services firm's Principal IT Infrastructure Engineer simply stated, "Migrating workloads between the cloud and our data center is easy. There are no problems."
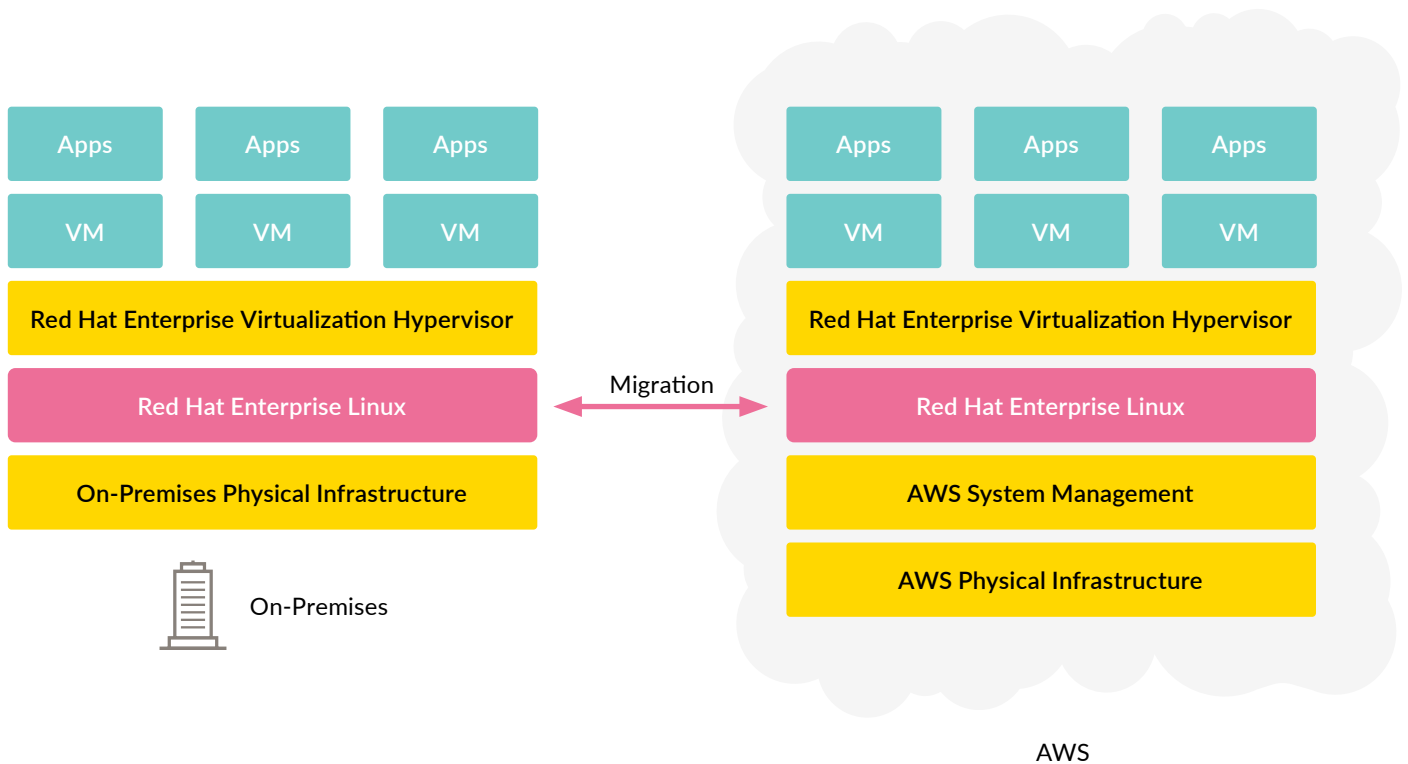
Figure 2 - Migration of workloads between on-premises data centers and AWS.

The portability of workloads contributes to the related, sought-after ability to avoid vendor "lock-in" in the cloud. A Senior Platform Engineer at a small tech services company put it this way: "I believe Red Hat Enterprise Linux has helped our organization <u>avoid cloud vendor lock-in</u>. We've been able to pretty reliably and easily lift, shift and redesign our application from on-prem to the cloud."

Red Hat Enterprise Linux enabled the tech company Architect to help his customers avoid cloud vendor lock-in because "they <u>didn't need to buy</u> 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." From his perspective, it's important to have a solution that avoids cloud vendor lock-in because customers are then free to move from one system to another system without any issues.

Senior Platform Engineer
at a tech services company
with 11-50 employees

"Red Hat Enterprise Linux has helped our organization avoid cloud vendor lock-in. We've been able to pretty reliably and easily lift, shift and redesign our application from on-prem to the cloud."
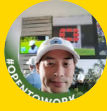
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Sherwin L.
Senior System Engineer at a tech services company with 1-10 employees

★★★★½

"The solution has helped us achieve security standard certifications."

<u>Read review</u> »

#2 – Data Security in the Cloud

Concerns about data security on AWS, while sometimes overblown, are still understandable. Anytime an organization delegates control of its data to another company, there will be a worry that the data may not be well defended. Red Hat Enterprise Linux users spoke to this issue, with a Senior Cloud Engineer at a small consultancy, sharing, "The fact that Red Hat goes to great lengths to get their stuff security accredited, it makes it a lot easier for me to get applications put into production since I can point my <u>customer security</u> people at the work that Red Hat has done upstream."

"The solution has helped us achieve <u>security standard certifications</u>," said a Senior System Engineer at a small tech services company. He added, "Red Hat excels at built-in security. There are lots of new security features in terms of profiles, email, using satellite, and disabling root login. They've got modules and built-in Ansible features. You can customize how it remediates, and Ansible will tell you what's out of compliance as you add rules."

For a Systems Administrator at Ithaca College, a university with over 1,000 employees, what mattered was the quality of Red Hat Enterprise Linux's <u>security updates</u>, which he said "are done very well." That way, he shared, "I feel confident that I'm not going to get hit with ransomware or a similar problem."

Datamato Technologies, a small tech services company, works with a private banking client that initially deployed Red Hat Enterprise Linux for approximately 30 nodes. According to their Director, it was "Due to the stringent security and compliance requirements in the banking industry, that they chose Red Hat Enterprise Linux as their preferred operating system to ensure security and governance across their infrastructure."

This user went on to explain that their client favored Red Hat Enterprise Linux due to its strong security posture and ability to scale applications on emerging technologies across the hybrid cloud. He said, "I believe that's what people are seeking in Red Hat Enterprise Linux. It is built with a strong focus on security, ensuring effective governance and managing security aspects well. We have high hopes that Red Hat will continue to invest more efforts in enhancing security."

Architect
at a tech company with
11-50 employees

"It has saved costs for our customers because it's a stable operating system, and they have no problem with security, patching, and so on."

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Other notable comments about Red Hat Enterprise Linux's security on AWS included:

- "The product has <u>good security</u>. We deal with very urgent issues." - Software Engineer at an energy/utilities company with more than 5,000 employees

- "What we need is something that doesn't crash, stays up to date, and <u>provides the security features</u> that we need to keep external players out. The CVEs that come out for the vulnerabilities are very fast. We try to do patching in different tiers. Our regular patching happens once every ninety days. And, then we have special iterations that need to be done, and those are on demand, or if there's a high-security risk and it's absolutely immediate." - Senior System Engineer at a university with more than 5,000 employees

- "They regularly send us updates regarding <u>patches and security vulnerabilities</u>. We patch our servers quarterly… They always send us updates on our official email, so it's quite good." - Principal Server Engineer at a software company with over 1,000 employees

#3 – Resiliency

AWS instances must be resilient, and the chosen Linux distribution has a role to play in ensuring this outcome. As a financial services firm's Principal IT Infrastructure Engineer put it, "Red Hat Enterprise Linux is a highly resilient operating system. It has a strong XFS file system, kernel, and package build." The tech company Architect concurred, referring to the resiliency of Red Hat Enterprise Linux as "quite good."

"We've been running, and we have over 99 percent uptime all the time," said a Director at a pharma/biotech company with over 1,000 employees. His team does monthly patching and kernel upgrades, "so it works," he said.

The tech services Transformation Management Office staffer characterized his Red Hat Enterprise Linux on AWS as "reliable and doesn't break or bring us any problems." So, he concluded, "Resiliency-wise, the solution is very good. It's good because we don't have a problem with our environment at this moment. When we don't have a problem, we don't need to explain what is to be improved in the solution."

Highly Resilient

#4 – Cost Savings and Payment Options

Saves on Costs

Reducing costs is a key decision point for Red Hat Enterprise Linux in the cloud, as a Manager, IT Operations at a retailer with over 10,000 employees explained. He said, "The solution <u>helped us reduce costs</u>… Application support and vendor support for Red Hat Enterprise Linux are better than other products."

"It has saved costs for our customers because <u>it's a stable operating system</u>, and they have no problem with security, patching, and so on," said the tech company Architect—linking stability with cloud economics. "It works everywhere without any issues," he added, "so the development of the applications is not impacted by the system." The financial services firm's Linux Engineer shared, "We moved from other priority operating systems to Red Hat Enterprise Linux because <u>it saves us costs</u> on the commodity hardware."
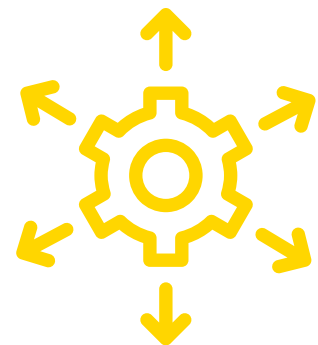
#5 – Performance

Performance is key in any environment and is sometimes a concern for organizations when moving workloads outside of their own datacenter to the cloud. An effective Linux distribution and cloud provider that can deliver performance, therefore, is essential. This was the case for the tech company Architect, who said, "Mostly, our customers use Red Hat Enterprise Linux because of its <u>performance</u> and security." He went on to explain that his customers want an OS that is supported and secure because "they don't want to spend too much time supporting a Linux version that is not enterprise. They want an enterprise product that is secure so that they don't have to think about it all the time."

#6 – Ease of Deployment

PeerSpot members who use Red Hat Enterprise Linux on AWS praised the OS for ease of deployment. "It's straightforward," said the tech company Architect. "It's pretty <u>easy to deploy</u> Red Hat Enterprise Linux." He then noted that all cloud providers support the deployment of Red Hat Enterprise Linux, and that the golden image of Red Hat Enterprise Linux is compatible with every cloud provider. He added, "There is a feature in the cloud console for joining the Red Hat Enterprise Linux account with the cloud account, so you can create cloud images from the console. It's pretty easy from that."

Architect
at a tech company with
11-50 employees

★★★★⯪

"Mostly, our customers use Red Hat Enterprise Linux because of its performance and security."

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Easy to Deploy

"RHEL has given us the opportunity to **accelerate the deployment** of our cloud-based workloads," shared Ithaca College's Systems Administrator. They are starting to put some of their apps and data on AWS, though much of their IT estate remains on-premises.

For perspective, the manufacturing company's Principal Systems Administrator recounted, "The first time I deployed Red Hat Enterprise Linux, I was swapping floppies. It has gotten a lot easier since then." He found **the deployment process to be straightforward**. He usually starts by mapping an image of the operating system (ISO) file and then, as he phrased it, "checking a bunch of boxes and letting it run." He said, "I can have a server up and running in about fifteen minutes. After validating the system and installing the necessary software, I can deliver it to the end user in an hour. I know that if I automate the process, I could probably reduce the time to six minutes."

The tech services Senior Platform Engineer likewise shared, "The product's deployment is pretty straightforward. Everything we build is automated and kicked out from there. Once the base image is built, there's really not much to do."

Red Hat Enterprise Linux's ability to facilitate an infrastructure-as-code approach is what stood out as a benefit to an IT Systems Engineer. He explained, "We've seen that with automation of server deployment, getting them spun up a lot faster." Previously, his team had used Satellite and Kickstart. With that approach, whether on bare metal or virtual servers, the process of deployment could take several hours. With Red Hat Enterprise Linux and the move to infrastructure-as-code, deploying a server takes about 10 minutes until it's ready to use.

"Management is portable and easily automated so deploying or installing packages and running updates are seamless," said the CEO of Dataops Consultancy, a small tech services company. "You can automate as much as possible from the deployment and maintenance points of view, both on-premises and in the cloud."

Friendly Support

#7 – Quality of Support

Support matters for success with Red Hat Enterprise Linux on AWS. As a Principal Systems Administrator at a manufacturing company with over 1,000 employees explained, "The most valuable feature is the reliability of Red Hat's support... I can always get a hold of someone when I call, and they always resolve my issue. I only have to call them once or twice a year, because things just work."

"I rate RHEL support a nine out of ten," said the tech services Senior System Engineer. "We can do captures to easily show them the issues we're having, and their response times are above average." A Senior Software Engineer at a tech services company with over 200 employees similarly reflected on the speed of response, saying that Red Hat's technical support staff are personable and "quick to get to problems." He felt that their support was better than other vendors, so he rated it a ten out of ten.

A Senior System Engineer at a university with more than 5,000 employees shared that he found Red Hat support "good overall"—better than other vendors. He elaborated, saying, "The staff is very friendly. The people I've met hear and discuss issues."

Conclusion

Making Red Hat Enterprise Linux work effectively on AWS depends on a combination of key success factors. As users explained in their PeerSpot reviews, the OS must be resilient. It must deliver performance and data security, as well as cost savings. Support has to be strong. Ease of deployment matters a great deal, as does ease of migrating workloads between the cloud and on-premises infrastructure. Together, these seven factors enable IT organizations to realize their objectives in the cloud.

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