

A Perspective from Enterprise IT Executives:
Understanding the Evolution of Linux Support Models

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Oliver Wyman, a global strategy consultancy, was engaged by Novell to determine IT decision-maker expectations for and experiences with Linux support. The findings included in this study are Oliver Wyman’s, based exclusively on interviews with IT executives and Linux system administrators from large enterprises across a diverse set of industries and geographies.

Executive Summary

Oliver Wyman, a global strategy consulting firm, recently conducted structured interviews with IT decision-makers at large enterprises worldwide. The purpose of this research was to understand how support priorities for Linux environments are shifting. The primary focus of this study was to understand the need for changes to the conventional Linux support business model and how new models of support, specifically Novell's Expanded Support Services, affect IT organizations.

Overall, Oliver Wyman found that the conventional Linux support model, where ongoing support comes directly from the Linux distribution vendor, constrains enterprise IT environments. A major constraint that IT Executives expressed is that they do not have recourse when they do not get the quality of support they require, since the conventional option has been to rely on the distribution vendor for support. IT Executives also expressed concerns in their ability to integrate their Linux environment with other parts of their server architecture, either with their Windows servers or across multiple Linux distributions where there was a mixed Linux environment.

While these constraints were observed across all of the companies in this study, IT executives fell into three groups in terms of how they chose to respond:

1. ***Accept the constraints and limit their use of Linux support in accordance.*** These companies understand the constraints of the traditional Linux support model and are satisfied with keeping Linux a small and discrete portion of their environment.
2. ***Willing to consider alternative support models but concerned about the implications.*** These companies are intrigued by the idea of divorcing Linux support from the choice of distribution vendor, or of transitioning to a new distribution while having their original distribution supported during the transition. However, they have hesitated to make the change because of concerns about the operational implications.
3. ***Have actively pursued alternative support models.*** These include early adopters of Novell's Expanded Support Services¹ and other third-party support models.² These companies pursued alternative support models to escape their negative experiences with their current support vendor's speed of resolution and skill set, to take advantage of cost savings and/or to improve ease of administration.

This study focuses primarily on Groups 2 and 3 and explores the implications of choosing Novell Expanded Support Services (referred to hereafter as Novell ESS) on those environments.

¹ Novell describes Expanded Support Services as follows: "The SUSE® Linux Enterprise Server Subscription with Expanded Support is a subscription to SUSE Linux Enterprise Server that allows customers to transition to SUSE Linux Enterprise while receiving technical support for certain existing Linux deployments, including Red Hat Enterprise Linux (<http://www.novell.com/products/expandedsupport/>).

² No third-party support model was mentioned more than once besides Novell Expanded Support Services and therefore we did not focus on these other third-party support models in this paper.

Key findings include:

- Companies that have switched to Novell ESS maintain a wide range of Linux environments. Some have selected ESS as part of a transition to standardizing on Novell SUSE Linux Enterprise Server (referred to hereafter as Novell SLES), but others have remained predominantly or entirely Red Hat Enterprise Linux environments (referred to hereafter as RHEL) or mixed environments and simply divorced the support relationship from their original distribution platform vendor.
- Companies that have not adopted Novell ESS commonly cite concerns about Novell's ability to support RHEL, the perceived difficulty of transferring certifications from their application software vendors, and the fear of being forced to transition to an all-SLES environment. The experiences of companies that have switched to Novell ESS indicate that each of these concerns is unfounded.

In short, this study finds that Novell ESS represents an important break from the conventional Linux support model, increasing the range of options IT Executives have for how to manage their Linux environment and creating new opportunities to better integrate Linux into the overall management of the broader server environment.

A Note on Methodology

The findings of this paper are based entirely on structured interviews that Oliver Wyman conducted with IT executives responsible for decisions about their company's Linux environment. Oliver Wyman recruited interview participants from a list of several hundred large enterprises. Study participants were selected to ensure a diversity of perspectives across industry verticals, geographies, and types of applications supported by Linux. Vendor preferences were not a screening factor. All of the study participants were promised anonymity and were not aware of the sponsor of this study, in order to prevent bias during the interviews.

The final sample included companies with a mixture of Linux server environments, the majority of which were entirely or predominantly Red Hat Enterprise Linux (RHEL) environments or mixed environments with SUSE Linux Enterprise Servers (SLES) and RHEL servers. These companies had experienced support for their distributions from Red Hat, Novell, both Red Hat and Novell, and, in two cases, a third-party support vendor. Nearly all study participants came from enterprises with at least 1000 employees and nearly all had heterogeneous server environments. Novell commissioned this study to better understand IT decision-maker expectations for and experiences with Linux support. Novell believed that the findings would support their assertion that a change in the Linux support model has benefits for customers. Oliver Wyman had complete control over research execution, data analysis, and synthesis of study findings into this paper.

Limitations of the Traditional Linux Support Business Model

Reliance on the distribution vendor for support leaves dissatisfied customers with no way out

All of the IT executives interviewed for this study recognized that the traditional Linux support model, where support subscriptions are sold by a Linux distributor for their specific version of Linux, creates quality of support risk and limits their ability to integrate their Linux environment with other parts of their server architecture. Integration was limited both across environments containing a mixture of Linux distributions as well as across Linux and Windows environments. Despite concerns about the conventional model from an industry perspective, approximately half of participants were comfortable maintaining the status quo for their own environments. In one case, the size of the Linux server estate and associated costs of support were too small to bother changing. In another case, alternative sources of support, such as internal resources, seemed cost prohibitive.

Nearly half of the interview participants, by contrast, are actively seeking to change the status quo in order to improve their support experiences and better manage Linux within their broader server environments. This group expressed significant concerns related to their reliance on Red Hat as their sole provider of support for their RHEL servers.

One of their most common complaints centered on being charged too much for a subscription relative to the low number of incidents. The other common frustration was dissatisfaction with timely resolution and/or skill in resolving incidents.

The IT Executives who expressed concerns with support costs noted that whereas there have been significant declines in hardware and application costs due to technology product innovation, there have not been parallel innovations or cost declines in support services.

“We look across the rest of our grid, and everything else – CPUs, the hardware, the application costs - these are all coming down in price - so it’s odd to see the OS supplier come in and say something like, ‘no, we add more value than we did last year so we can charge more.’”

-IT Executive at a global manufacturing company

A Senior IT Executive at an international financial services company hypothesized that his Linux support rates are high because the support vendors do not expect their customers to have alternate support options, in essence *locking them in*. Other Executives felt that Red Hat staff lacked appropriate support skills. For example, an IT Executive at an aerospace and defense corporation felt that support was difficult to navigate and that skilled staff were hard to find, mentioning, “The few times we’ve called we’ve been very dissatisfied. Part of it is the way they are structured – it’s very difficult to get a hold of somebody. It’s very frustrating to find the right

person. There have been times where I have called and felt like I had a better handle than the Red Hat person.”

An IT Executive at a top energy corporation expressed concerns with quality of responses from Red Hat, noting that, “The support model was [that] we report a problem, we figure it out and then we call them back and tell them never mind. We never got a usable response.”

“They thought they could sock me on the back-end because there were no licensing costs. They weren’t expecting us to actually pull the trigger [and leave]...They got away with this before because no one else was providing support.”

-Senior IT Executive at an international financial services company

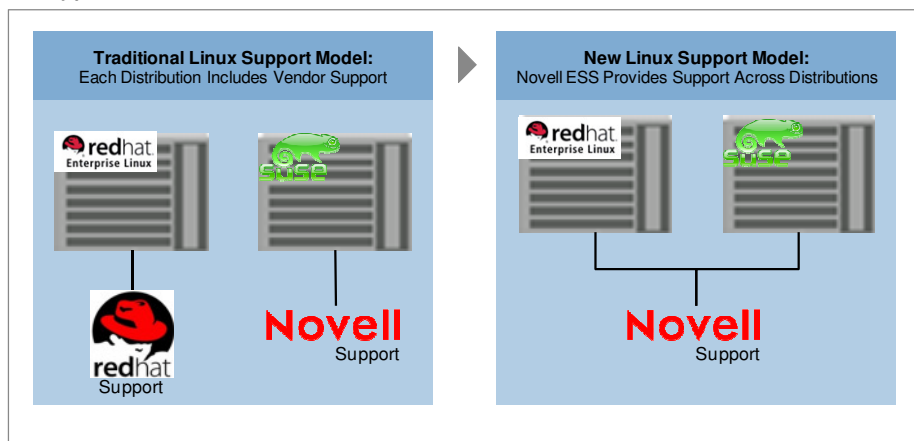
Companies who were frustrated with their Linux support experience have taken direct action to address these concerns by turning to third-party service-providers or expanding their internal Linux support capabilities. The next section explores the experiences of a diverse set of companies that have chosen to adopt Novell’s Expanded Support Services program.

Insight from Companies that Have Switched to Novell Expanded Support Services

ESS customers expressed satisfaction with cost savings, improved support and flexibility to maintain/transition to their preferred distribution

While study participants mentioned emerging third-party support options³, Novell ESS was most frequently cited as marking a significant break from the past because it allows companies to create a unified support environment across Linux distributions. (See Exhibit 1).

Exhibit 1



³ Third-party support options currently being used included Oracle and Concurrent (for first-level support). IBM was also mentioned as a possible future provider of third-party support.

The companies who have adopted Novell ESS represent a diverse set of firms and have differing views of the desired end-state for their Linux environment. These companies fall into two broad groups:

1. RHEL environments that want to maintain a single Linux distribution but are not sure whether RHEL or SLES is the best option for them long-term. These organizations want to create flexibility while improving their level of support and integration of Linux into their overall IT environment.
2. Mixed RHEL & SLES environments that want to maintain a mixed environment while creating an integrated approach to managing that environment.

Group #1: RHEL Environments Looking for Flexibility

One set of Novell ESS adopters consisted of companies that have standardized on RHEL. For these companies, maintaining a single Linux distribution is viewed as optimal, but they were dissatisfied with the quality and value of support they receive from Red Hat today. Transitioning support to Novell was viewed as a cost-effective way to maintain support for their existing environment, while creating the flexibility to switch to SLES, down the road.

In one example, a global manufacturer with an almost exclusively RHEL environment chose to adopt ESS out of a desire to reduce their dependence on increasingly unsatisfactory and high-cost Red Hat support. However, this customer was not sure whether to stick with RHEL or switch to SLES and planned on taking his time to make the decision, while receiving Novell support in the meantime (See Case Study 1)

ESS Customer Model 1: Novell Support for RHEL Environment

A global manufacturer maintains an environment with over 4000 servers, which are almost exclusively RHEL.

The company chose to adopt ESS due to the desire to reduce dependence on increasingly unsatisfactory and high-cost Red Hat support.

“Novell is much better than our previous supplier [Red Hat], who was more expensive and didn’t understand our business.”

The company remains committed to having a strong lead distribution and is currently evaluating whether to switch to SLES or stay with RHEL.

In contrast, a global financial services provider made the decision to switch from RHEL to SLES right away. His original decision to adopt ESS centered on complaints that Red Hat was slow to resolve issues and that the costs of Red Hat support were high. The customer emphasized that thus far the experience with ESS had been a positive one given the ease of working with Novell.

One common factor across firms in this group was that they valued the ability to maintain flexibility with respect to the composition of their server environment.

Group #2: Mixed Linux Environments Looking for Efficiencies

Another set of Novell ESS adopters consisted of companies that have mixed Linux environments today, either for legacy reasons or because they view one distribution as superior to the other for particular applications or workloads. For these companies, the primary value of the Novell ESS offer is the ability it provides to manage their entire Linux environment as a common entity. Costs savings are a factor, but the broader integration objectives are even more important.

Case Study: ESS Customer Model 2 Novell Support for Mixed Linux Environments

A US healthcare provider has an even mix of both RHEL and SUSE in its Linux environment.

The switch to ESS was driven by a desire to reduce support costs and improve IT management.

The customer is very pleased with the level of support Novell provides for the Red Hat portion of their environment and has no plans to move away from its heterogeneous Linux environment.

"I see our environment of the future containing Red Hat, SUSE and Windows... We are not thinking of this as a transition process from Red Hat to SUSE. We'll continue to run both side by side. We are just reducing the amount we have to pay Red Hat."

A global financial services company that primarily runs SLES, but has a significant Red Hat presence said, "The decision to use Novell to support Red Hat is that it streamlines our operations... Also we have one number to call ... To be honest, cost savings were only a small part of the decision." Though this company was interested in ultimately switching to a homogenous SLES environment, given that they still have some products that are not yet certified on SLES, they will plan on keeping some Red Hat in their environment in the medium term.

The option to potentially standardize on SLES at some point was viewed as attractive to some, but in general, a company that falls into this category expects to maintain a heterogeneous Linux environment. For example, for a US healthcare provider, adopting ESS was considered a step towards better support and flexibility as the company was able to maintain a mixed environment - their preferred server end state (See Case Study 2 for more detail about this company's ESS adoption). According to this IT Executive, the switch to ESS has been a positive one, "With Novell, we are more confident with our service up to this point. They have been very responsive."

Insight from Novell ESS Customers on Concerns of Non-Adopters

Experiences of Novell ESS customers indicate that non-adopter concerns are unfounded

Non-adopters, though interested in ESS, expressed reservations about adopting the new model. This section explores specific concerns that IT Executives cited, and the relevant experiences of the Novell ESS customers that participated in the study, which indicate that the concerns are unfounded.

Concern #1: Novell will not be able to support RHEL adequately

Some non-ESS customers expressed concern with Novell's ability to support their RHEL environment. As one study participant put it, *"I am kind of wary of Red Hat being supported by Novell, or the other way around. They don't have access to the completed support tree of what makes up the OS. They don't have the expertise. Yes, they all get their base code from the same kernel. But does Red Hat have a service contract with Novell? If Novell can't solve the problem, do they give up or do they have another path? When it gets to that level, who do they turn to if they can't fix it? I would have to know before I place a contract."*

ESS customers interviewed did not find this to be a concern. They described their experiences thus far as being very positive. Companies value Novell's overall responsiveness and are confident in Novell's ability to support their RHEL environment. One IT Executive summed up this experience, stating *"[Novell support personnel] have been very helpful, which is big. On the RHEL side, Novell will take publicly released code and then strip it of proprietary call-home features. Novell maintains a code branch in that space. They maintain custom branches just for us until it can get compiled into the main branch by the open source community. We're very early on – we have had less than a year with Novell support. To date, we've been very happy with Novell and how they respond to any sort of questions or issues we've had, which is much better than our previous supplier [Red Hat]."*

In addition to this customer testimony, Novell has proactively addressed this concern through a description of the patching process on their website.⁴

Concern #2: Novell may try to force a rapid and complete conversion from RHEL to SLES

Another concern that companies interested in switching support were worried about was having to switch Linux distributions. One IT Executive with a RHEL-dominant environment noted, *"I wouldn't have any qualms about switching support...if it is just support, that's easier to switch. But, it would be a bigger deal to switch the OS. The type of operating system we have chosen is*

⁴ According to a document found on the Novell website, "RHEL to SLES Migration Overview," Novell works with customers through field teams and the service organization to understand the issue, replicate, analyze and provide a fix if appropriate. After testing at Novell, the fix is provided to the customer and back through bugzilla to Red Hat. Red Hat can accept the patch, or provide an alternative fix, at which point the customer has the option of keeping the Novell-supplied patch or applying the Red Hat patch.

driven by the particular type of service that we are trying to deliver and we would not want to change that unless the services we are trying to deliver changed. Right now we have a commitment to operating Red Hat.”

As noted in the last section, companies did not need to immediately or inevitably transition to a SLES environment and had different views about transitioning. One group preferred the flexibility of keeping a mixed environment for the foreseeable future and having Novell support that mixed environment, *“I see our environment of the future containing Red Hat, SUSE from Novell and Windows...We are not thinking of this as a transition process from Red Hat to SUSE. We’ll continue to run both side by side.”*

The other group saw transitioning as a possibility, but not as an inevitability, and saw Novell as their long-term support provider, *“Novell provides support for RHEL. We are deciding between two options – RHEL or SLES and we will not deploy any change until next year [Novell will continue to support RHEL].”*

Concern #3: Switching to a SLES environment may not be worthwhile

Companies interested in the idea of moving to a SLES environment also questioned whether it was worthwhile to switch given the perception that it takes great effort to switch. This concern was best described by one Executive at a US healthcare services company.

“The problem is that SUSE and Red Hat are so close. It’s a lot of work to switch an OS for no reason.”

ESS customers who had transitioned or were considering transitioning to a SLES environment dismissed this concern, noting that switching servers is akin to upgrading servers, a process that they would likely complete anyway. *“Switching to SLES is similar to upgrading from RHEL 4 to 5. A transition from one OS to another OS is like doing a major upgrade.”*

One customer who had already transitioned further pointed out that there was a clear return that made switching worthwhile, *“Overall I would say we are happy with the migrations and the amount of expense they have cut from the business. From a cost perspective, the maintenance cost for Novell is less than what we were paying per server with Red Hat. The second thing is that as we virtualize our environment we are going to have less up front costs. With Red Hat, I had to do a yearly retool depending on the number of servers. But, the overall model with Novell was more attractive [for a virtualized environment].”*

Concern #4: The ISV certification process will be arduous.

Companies assumed that they would need to stick with their Red Hat servers due to differences in which software is supported by Red Hat and Novell. One IT Executive at an Aerospace and Defense Corporation felt that *“Generally our projects call for a specific operating system. There*

are a lot of software providers and developers and they often say that 'our software is developed and supported by Red Hat.' If SUSE or CentOS is not listed then we can't look at those."

Novell ESS customers echo frustration with the time-intensive nature of ISV certification but have been able to get their applications certified. ESS customers noted that this is a process that will continue to become easier over time. *"The only complaint I have [with Novell] is with ISV certification. Most vendors will support Red Hat and then others on an as needed basis. It has been a headache but they have been actively engaged, including working with the ISVs directly to go through the process...I view this as a low concern because of the great relationship we have developed with Novell."*

Other ESS customers noted that from the ISV perspective switching should not be a concern at all, *"In terms of ISVs, they don't care where I would get support from so it doesn't matter if I switch from Red Hat to Novell support. Applications are looking for certain files to be in certain places and they don't really care about where the support comes from."*

Conclusion

Customer experience indicates that Novell ESS has the potential to create a substantial shift in the traditional Linux Support business model. Companies that have adopted Novell ESS cite four major benefits.

1. They have been able to reduce their Linux support costs to much more reasonable levels in line with customer expectations.
2. They are able to escape low quality support and have thus far experienced high satisfaction with support through their new relationship with Novell. They are particularly satisfied with Novell's responsiveness, and with Novell's ability to support both Red Hat and Novell servers.
3. They report a greater ability to manage their server environment in a more integrated manner, streamlining operations significantly.
4. They are able to take advantage of the above benefits while being allowed the flexibility to choose their preferred end server environment.

This study found that nearly half of the IT Executives interviewed are not satisfied with the traditional Linux support model that creates a hard link between the selection of a particular Linux distribution and the support relationship and would like to change the status quo.

Some non-ESS customers expressed interest in accessing the benefits described by ESS customers, but had reservations about the difficulty in having one vendor support another company's distribution, the fear of having to switch to a new server environment and the challenge of obtaining ISV certifications. The experiences of ESS customers show that these concerns are unfounded.

Companies are likely to benefit as models like Novell ESS become more standard in the industry. As more companies experience lower support costs and higher levels of integration across server environments, demand for these improvements will likely grow, impacting all organizations.