White Paper

Veeam and Cisco UCS Are Better Together

Looking Closely at the Shared Traits of Veeam and Cisco UCS: Reliability, Performance, and Manageability

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May 2017

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Executive Summary

Once, virtualization centered on consolidation. It now centers on supporting data center modernization and is usually focused on improving reliability and performance. Those reliability and performance improvements in turn bring greater agility to the organizations' business processes, which is the true hallmark of a modern software-defined data center.

Most organizations did not start their virtualization journeys by deploying Veeam software and Cisco UCS servers together. Typically, they adopted virtualization gradually and later decided to "get serious" about data center modernization. Getting serious about modernization required them to reassess their IT infrastructures, at which point they discovered that their old approaches were inadequate. Often, that discovery resulted in a decision to assess/use Veeam and Cisco UCS together.

Reliability, performance, and agility—along with ease of management—appear to be why organizations are consistently selecting a combination of Veeam and Cisco UCS over their respective alternatives. According to the IT decision makers interviewed by ESG, the decision appears to be a smart one.

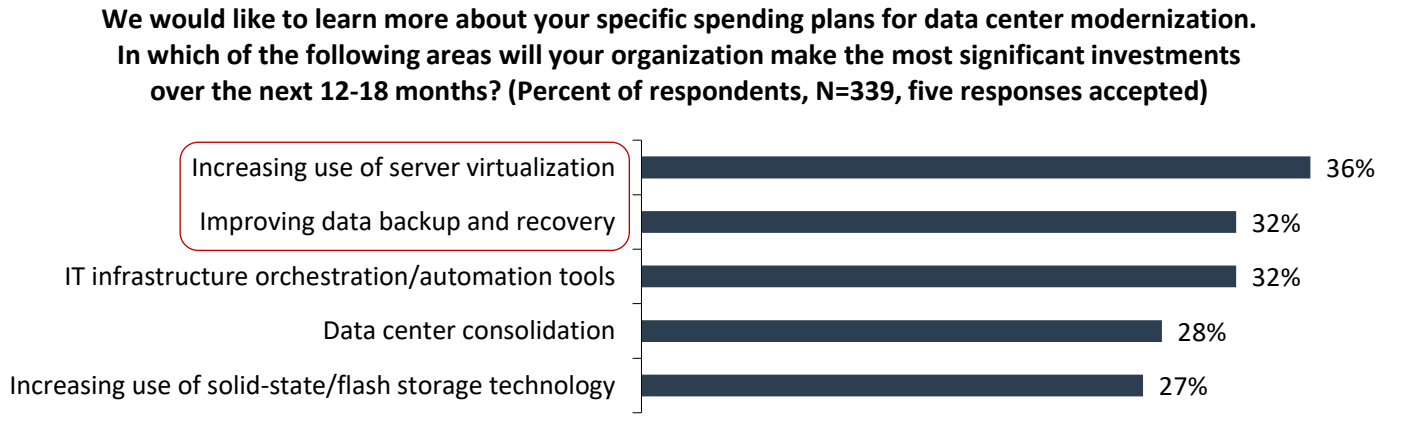
This white paper:

- Explains why virtualization is frequently the centerpiece of data center modernization, shedding light on the effect that virtualization and overall modernization can have on an organization's data protection strategy.
- Describes the interdependence between a superior approach to data protection and the success of one's virtualization deployment strategy.
- Explores the parallel alignment of the Veeam and Cisco solutions—including how, together, they are satisfying organizational requirements for reliability, performance, agility, ease of management, and TCO.
- Shares the first-hand experiences of organizations that run highly virtualized IT environments and have been using both Veeam and Cisco solution components for at least three years.

Introduction

Data center modernization starts with increasing the use of virtualization, which improves production capabilities but also necessitates improvements to data protection and recovery capabilities. According to ESG research, many surveyed IT organizations engaged in modernization efforts are prioritizing both virtualization and protection (see Figure 1).[1]

Figure 1. Top Five Data Center Modernization Spending Priorities for 2017



Source: Enterprise Strategy Group

[1] Source: ESG Research Report, *2017 IT Spending Intentions Survey*, March 2017.

This finding is encouraging. As ESG frequently states, *when you modernize production, you must also modernize protection*. However, not every organization's approach to modernization is identical:

- Some organizations modernize their protection solutions ***reactively*** after discovering (the hard way) that their legacy approaches are inadequate.
- Other organizations modernize their protection capabilities ***proactively*** as part of a larger "reimagining" of a more agile data center infrastructure, whose design goals include superior recoverability and availability of IT systems.

In either case, when one invests in a highly virtualized infrastructure as part of a data center modernization or digital transformation initiative, the protection of data must be (re)considered.

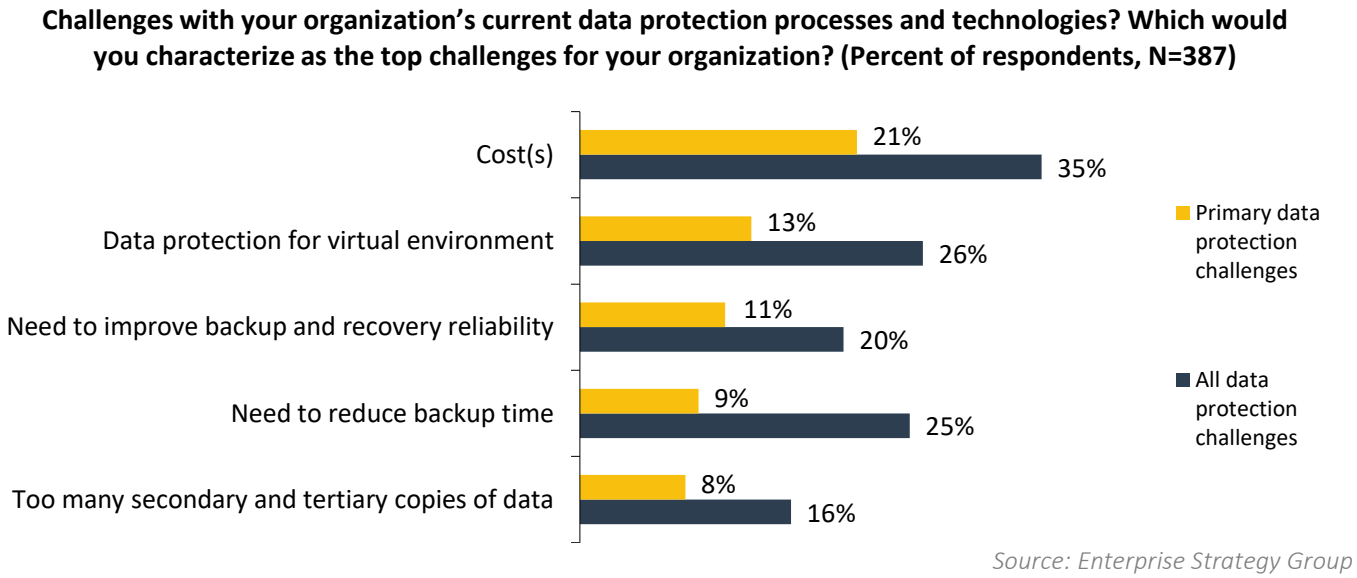
Better Data Protection Is What Organizations Want

The tight relationship between virtualization and data protection cannot be overstated. Certainly, it is reflected in the top protection challenges organizations say they struggle with: 82% of surveyed organizations recognize the interdependence between a superior approach to data protection and the success of their virtualization deployment strategy.[2]

Some organizations acknowledge that an inadequate protection solution hindered their virtualization strategy. But many others observe that a superior approach to data protection did the opposite for them—it actually accelerated their virtualization efforts. That is a notable discovery, especially when examined through two different lenses.

The first lens focuses on challenges faced by hands-on IT implementers.[3] As Figure 2 shows, IT implementers are struggling with virtualization as an amorphous platform to be protected and recovered. In addition, they need assurance of the reliability and agility of the data protection solution (for virtual and other workloads).

Figure 2. Top Five Data Protection Challenges

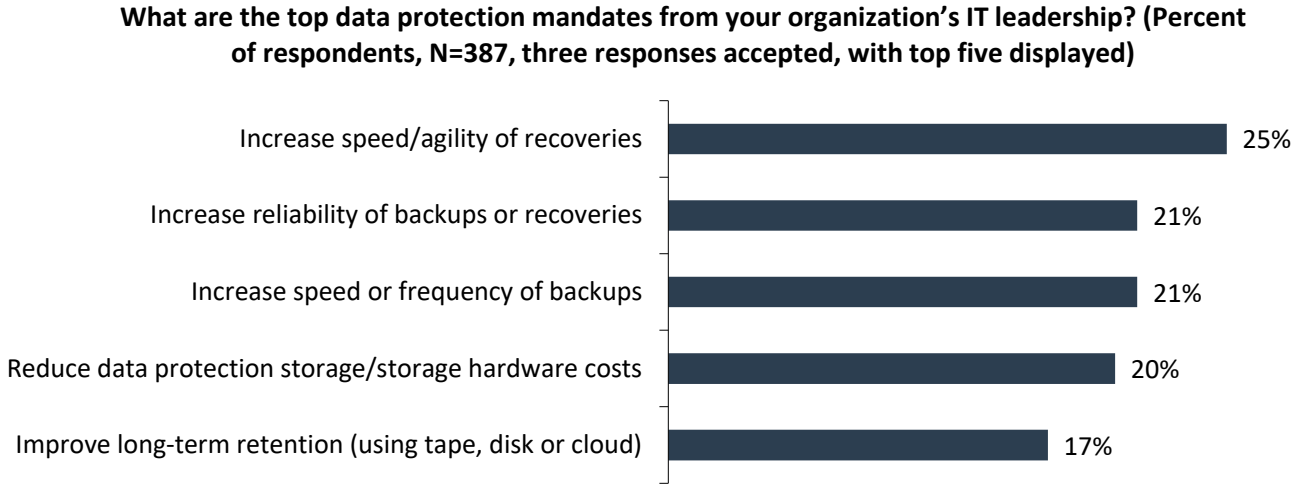


Source: Enterprise Strategy Group

The second lens focuses on the pressures those IT implementers feel from senior leadership in terms of the various data protection mandates they are being asked to adhere to (see Figure 3)—again with reliability and agility being top of mind.[4]

[2] Source: ESG Research Report, *2017 Trends in Data Protection Modernization*, June 2017.
[3] ibid.
[4] ibid.

Figure 3. Top Five Data Protection Mandates from IT Leadership



Source: Enterprise Strategy Group

Cisco and Veeam: Two Vendors with Several Shared Defining Traits

ESG was contracted to conduct up to ten Veeam/Cisco joint customer interviews to ascertain the buying rationales and the satisfaction criteria of organizations that chose Cisco UCS servers and Veeam backup and recovery software. ESG conducted detailed, qualitative telephone interviews with senior-level IT decision makers at those companies. The companies exhibited the following demographic characteristics:

- Sizes ranging from 100 to 4,000 employees, generating $100M to $1.5B in revenue, as well as a nonprofit.
- Virtualization percentages of at least 95%, with a philosophy that all new servers would be both virtualized and hosted within a converged infrastructure (unless an operational requirement for an exception existed).
- Most are VMware centric or VMware exclusive, although some use Microsoft Hyper-V somewhere within their environments. One organization is standardized on Hyper-V.
- They have relied on Cisco UCS for more than four years on average, and on Veeam software for a similar length of time.

ESG made a key observation during the interview process related to the parallels between Cisco sentiment and Veeam sentiment.

Usually, IT solution architectures result from an organization choosing one component, which subsequently spurs it to buy and use a complementary component as well. That progression was not the case among the Veeam/Cisco UCS customers interviewed. Those organizations instead identified and sought out three attributes of a modernization solution, finding that both vendors' products exhibited them. The common desired attributes were:

- Reliability
- Performance
- Manageability

Reliability

The most frequently cited characteristic of both Veeam and Cisco customers was *reliability*, which wasn't an attribute they looked for during their initial virtualization endeavors years ago. Back then, they embarked on virtualization using their existing storage arrays along with high-end servers from hardware vendors other than Cisco.

As they first moved beyond an all-physical infrastructure, they quickly saw the benefits of consolidation, prompting them to accelerate their virtualization strategy for further benefit. Their legacy protection solutions were not reliable when attempting to protect or recover VMs. Those solutions needed to be replaced with something better.

Meanwhile, as the organizations added more VMs, they found their non-Cisco hosts were challenging to maintain or expand. Multiple interviewees reported that they concluded it would be best to improve hardware reliability by switching to Cisco UCS hosts and to Veeam for reliable VM protection/recovery.

Many organizations anticipate a three-year lifecycle for production hardware (particularly with ever-heightening availability/reliability demands). But several Cisco customers stated that although they are investing in more UCS hardware as their virtualization modernization initiatives proceed, even their earliest UCS hosts "still just work."

> One interviewee said, "The UCS platforms are rock solid. In three and a half years, we haven't had a single service call. Not one blade has failed or needed replacement. Reliability has been so great that we are now expanding our end-of-life plan to five years and are easing our capital budgeting. The Cisco hardware is so reliable that we feel comfortable stretching out the timeframe."

In other cases, organizations told ESG that as they outgrew their initial UCS servers, instead of retiring them, they simply relocated and redeployed them to secondary operational centers with slightly lower density requirements. The interviewees often described Cisco UCS reliability in terms of longevity, while they observed Veeam's reliability benefits mainly as a stark contrast to the antiquated backup solutions previously in use.

> An interviewee told ESG, "Having to use our earlier solution made me question my sanity on a regular basis. And calling that vendor's support was only slightly less painful than banging my head against a wall. Backing up VMs was difficult, unreliable, and poor from a performance perspective. Upgrading to a newer offering from that vendor was expensive, so we evaluated Veeam and another virtualization backup solution instead. Veeam outperformed."

Of course, in many organizations, reliability is based in large part on perception. Veeam's customers cited several factors that increased their perception of confidence:

- Frequent recoveries with consistently positive outcomes in both test and production environments.
- Veeam's ability to automate risk-free "sandboxing" of test backups to ensure recoverability.
- Automated reporting that informs business unit managers and IT teams of the success of nightly backup and recovery tasks.

However, the real measure of data protection reliability is an assured ability to *recover data when it's needed most*.

> One interviewee said, "I can't tell you how many times Veeam has saved my bacon."
>
> Another stated, "I probably have 1/100th of the problems that I had with my last solution. And most of those, I can solve myself. Generally speaking, Veeam just works, and we've never had a situation where it stopped."

Tellingly, one-third of the interviewees revealed they had recovered from a ransomware incident by using Veeam, whereby data was not only recoverable, but also up to date enough (thanks to frequent protection) to avoid costly productivity impacts, not to mention extortion fees.

Performance and Manageability

If digital transformation or data center modernization are part of your plans for 2017, it is likely that agility is high on your requirements list. Agility comes from good ***performance*** and good ***manageability***. Thus, it isn't surprising that the interviewees who spoke with ESG cited those two attributes among the most-sought capabilities of their server infrastructure and backup/recovery solution—reporting that Cisco UCS and Veeam both consistently exhibit those traits. Essentially, they say, "We got what we paid for."

People may assume all Intel server architectures yield relatively similar performance. Cisco customers would argue with that assumption. Agility and performance are often sought during a "second wave" of virtualization maturation (in contrast to the first wave, which involved using whichever legacy physical servers were in place). The Cisco customers interviewed by ESG determined that continuing to purchase and upgrade servers from other vendors wouldn't let them achieve their data center modernization goals. They rethought their architectures and decided to move forward with Cisco UCS instead.

> One interviewee said, "We had racks full of older servers, with a rat's nest of cables behind each one. We looked at three vendors: two of the top server lines plus Cisco. It became clear to us very quickly that UCS was better. It was virtualized from the top down, easier to manage, etc. This was a no-brainer for us."

Especially in large-scale virtualization deployments, the modularity and consistency of UCS was noted, in part due to its ability to leverage Cisco's Service Profiles (templates).

> An interviewee told ESG, "When I need capacity, I simply add more blades, copy a Service Profile, and run the associated deployment scripts. Then I'm up and running. When that chassis gets full, I just add another one, attach a few cables, and we can keep on growing."

The performance of a data protection solution is best reflected by its ability to provide successful, agile recoveries. Veeam customers cited the software's Instant Recovery capability among its most distinguishing features, often contrasting it with the lesser capabilities of various prior solutions. Rapid recovery is second in importance only to reliability, and ESG heard several success stories.

> An interviewee stated, "Shortly after our virtualization initiative kicked in and we discovered our legacy solution was inadequate, we met some Veeam reps at a trade show. They assured us, 'Veeam will work.' Not long afterward, we'd deployed it in one part of our company. Then, one of our key virtualized production platforms was accidently deleted. We were able to recover that platform, getting it back online even before our customers noticed an outage. We went back to Veeam, wrote them a check to protect the rest of our environment, and have been with them ever since."

For some organizations, manageability is best reflected in how much time they regain thanks to simplicity of implementation and automation of functionality. Most respondents stated that they interact with the Veeam management console just 20 to 30 minutes per day to "check on things" and invoke restores.

> One interviewee said, "Choosing Veeam was a huge win for us. Backup used to consume 20 to 30% of a person's job. Now it's two to three hours per week."
>
> And another interviewee put it this way: "If it takes more than 20 minutes per day, you're doing something wrong."

Those time savings were experienced not only when everything was working, but also when a problem would arise.

> An interviewee told ESG, "We had an issue in which we were doing something wrong—Veeam wasn't working with our SQL cluster. I opened a ticket using the Veeam portal, and I quickly received an email from a Veeam engineer with instructions. We didn't even have to call them. We followed the directions, and everything has been flawless since."

Economic Advantages

An organization's ability to resume normal operations quickly after a data-loss or data-corruption event is critical to its success. Put another way, any downtime or data loss will cost an organization money. Proactively addressing downtime and data loss through better data protection will cost far less.

To quantify the economic value of the Cisco/Veeam solution at a more technical level, ESG Lab recently conducted a separate hands-on evaluation of that specific architecture combination.[5] The effort included technically evaluating the price/performance of the Veeam-plus-Cisco solution, including modeling its cost/capacity and its price/performance versus alternatives on the market.

ESG Lab found that:

- The Veeam/Cisco solution offers higher capacity compared with other offerings at a significantly lower cost per terabyte of storage.
- The price/performance of Veeam and Cisco UCS was 49% lower than the closest comparable alternative solution ($37.26 per GB per hour versus $73.16 for the other solution).

[5] Source: ESG Lab Validation, *Veeam Availability Suite and Cisco UCS*, February 2017.

The Bigger Truth

Data center modernization continues to be a top-of-mind issue at most IT organizations, with many leaders intent on putting their organizations on the path to full digital transformation.

Achieving digital transformation enables IT to provide more agility and acceleration to the business units it supports, but only if the underlying solution components are reliable, highly performing, easily deployed, and easily managed. And certainly, good TCO adds extra appeal.

Reliability, performance, and manageability are the characteristics that were most often sought beforehand by the customers interviewed by ESG:

- With greater reliability, these organizations are spending less time troubleshooting production crises, thanks to servers that don't go down or that can be more assuredly recovered.
- With better performance, these organizations are increasing the density of their virtualization infrastructure, thereby accelerating their broader IT delivery strategies, ensuring that data protection won't hinder their environments, and performing data recoveries faster and more responsively.
- With easier manageability, acquisition becomes simpler for these organizations, deployments become more consistent, and daily tasks are minimized. Such improvements enable IT to focus more on moving forward, rather than concentrating solely on maintaining the status quo.

Organizations seeking to add these differentiating characteristics to their own production and protection infrastructures should note that they are the exact characteristics most often recognized and appreciated by the organizations that already operate Cisco UCS servers and Veeam software together.

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