The Business Value of VMware Cloud on AWS for Creating VMware Hybrid Cloud Environments

Dave McCarthy
Research Vice President,
Cloud and Edge Infrastructure Services, IDC

Matthew Marden
Research Vice President,
Business Value Strategy Practice, IDC

Table of Contents

CLICK ANY HEADING TO NAVIGATE DIRECTLY TO THAT PAGE.

Executive Summary

Enterprises increasingly depend on digital infrastructure to support business-critical applications and services designed to support internal users and customers as well as support advanced business operational systems. Hybrid cloud has played and will continue to play an essential role in this scenario. However, IDC's research shows that a number of challenges exist, such as inconsistent operational workflows that can hamper the smooth migration of applications in hybrid cloud environments. VMware Cloud on AWS is designed to deliver a public cloud environment with VMware tools and workflows used in private cloud environments, thereby addressing these challenges.

IDC conducted research that explores the value and benefits for organizations of using VMware Cloud on AWS to create VMware hybrid cloud environments for running important business applications and workloads.

On the basis of in-depth interviews with VMware customers, IDC calculates that, compared with running these applications and workloads on a traditional on-premises infrastructure, these VMware customers will achieve benefits worth an annual average of $771,200 per 100 virtual machines (VMs) ($44.95 million per organization) by:

- Cost-effectively boosting the overall effectiveness and efficiency of cloud/on-premises application and infrastructure migration
- Improving the ongoing performance of IT infrastructure and application development teams
- Boosting overall business productivity in their organizations as the result of faster migration
- Limiting the incidence of unplanned downtime, thereby further contributing to business productivity

Click highlights for related content in this document.

BUSINESS VALUE HIGHLIGHTS

COMPARED WITH ON-PREMISES INFRASTRUCTURE

361%
three-year return on investment

6-month
payback period

22%
lower cost of infrastructure

32%
higher IT infrastructure team efficiencies

28%
lower three-year cost of operations

63%
faster to deploy new compute resources

95%
reduction in unplanned downtime

Continued next page ▶

Situation Overview

One of the original promises of the cloud was simplicity. Instead of managing the intricacies of on-premises infrastructure, developers and IT professionals could focus on adding value to the business. In fact, many cloud providers predicted a world where on-premises datacenters would disappear entirely.

Today, most enterprises will agree that the cloud is anything but simple. Infrastructure has become more distributed and more complex. Hybrid architectures still exist, multicloud deployments have become commonplace, and clouds have been extended to remote edge locations.

To address this complexity, IDC predicts that by 2025, 75% of organizations will favor technology partners that can provide a consistent application deployment experience across cloud, edge, and dedicated environments (see *IDC FutureScape: Worldwide Cloud 2023 Predictions,* IDC #US48602322, October 2022).

There is no question that the cloud has become the de facto platform for innovation. The ability to quickly provision resources, scale on demand, and deploy globally has changed the way enterprises build, manage, and secure applications.

That is why, even in challenging economic times, cloud services remain resilient. IDC is forecasting the overall cloud services market to reach $794.6 billion in 2024, with a year-over-year growth rate of 19.9% (source: IDC's *Worldwide Semiannual Public Cloud Services Tracker*).

Click highlights for related content in this document.

BUSINESS VALUE HIGHLIGHTS (CONTINUED)

34%
higher development team productivity

$3.42 million
higher annual revenue per 100 VMs

COMPARED WITH OTHER PUBLIC CLOUD

$198,700
in value per 100 VMs from faster migration

52%
less staff time required to migrate

VMware Cloud on AWS for VMware Hybrid Cloud Overview

Built upon a history of reducing complexity in the datacenter, VMware Cloud on AWS is designed to simplify the management of hybrid cloud environments by operating them as a single,

unified set of infrastructure. Built on top of VMware Cloud Foundation, VMware Cloud on AWS is a fully managed cloud service with built-in compute, network, and storage services that enables customers to migrate applications faster without changes.

VMware Cloud on AWS brings the company's enterprise-class software-defined datacenter (SDDC) software to AWS Cloud's dedicated, elastic, and bare metal infrastructure (EC2).

Key attributes of VMware Cloud on AWS include:

- Delivered, operated, and supported by VMware by Broadcom
- On-demand capacity and flexible consumption
- Complete operational consistency with on-premises SDDC
- Global AWS footprint, reach, and availability
- Direct access and integration with native AWS

Through the use of common tools, there is no need to retrain staff. This allows customers to minimize disruption both during and after migrations by extending established security, governance, and operational policies to the AWS environment.

The Business Value of VMware Cloud on AWS for VMware Hybrid Cloud

Study Firmographics

IDC conducted research that explores the value and benefits for organizations of using VMware Cloud on AWS to create VMware hybrid cloud environments for running important business applications and workloads. The project included interviews with decision makers at seven organizations using VMware Cloud on AWS. These individuals have experience with and/or knowledge about the benefits and costs of using VMware Cloud on AWS in the context of VMware-based hybrid IT environments in terms of outcomes affecting IT operations, core businesses, and costs.

Table 1 presents study demographics. The organizations that IDC interviewed had an average base of 30,986 employees and total average annual revenue of $7.25 billion, indicating an overall enterprise profile, with medians of 5,000 employees and $500 million annual revenue. In terms of geographic distribution, four companies were based in the United States, with the remainder in Denmark, India, and Japan. There were a number of vertical markets represented, including the banking (2), automotive, IT provider, real estate, retail, and telecommunications sectors.

TABLE 1

Firmographics of Interviewed Organizations

	Average	Median
Number of employees	30,986	5,000
Number of IT staff	6,470	1,000
Number of business applications	423	65
Annual revenue	$7.25B	$500.00M
Countries	United States (4), Denmark, India, and Japan	
Industries	Banking (2), automotive, IT provider, real estate, retail, and telecommunications	

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Choice and Use of VMware Cloud on AWS for VMware Hybrid Cloud

The organizations that IDC interviewed described their use of and their rationales for choosing VMware Cloud on AWS as a platform for running business-critical applications and workloads while ensuring a nondisruptive migration of these workloads to a cloud environment. Study participants linked their choice of VMware Cloud on AWS to already having significant levels of staff knowledge of and experience with VMware functionality and tools, which they concluded would enable more seamless cloud migrations. They also valued their ability to leverage a cloud-based VMware environment to scale more readily to business needs as well as efficiencies and performance gains that they believed they would achieve while leveraging VMware functionality and tools.

Study participants elaborated on the following benefits:

Confidence in VMware environment, but in cloud:

"We were already using VMware in our datacenter, so we had the skills, which would make moving to the cloud easier. We had already seen the performance of VMware in our datacenter and its resiliency, so we built the high-availability model on AWS similar to what we had built into our datacenter."

Refactoring requirements less extensive; similar experience to existing on-premises environment:

"We chose VMware Cloud on AWS because we would not need to refactor our environment as extensively because it's the same experience as on premises. It's like on premises with similar integrations but more flexibility."

Reduce ongoing maintenance needs in light of production environment requirements:

"In a physical on-premises environment, we don't have the capacity or dedicated time to do maintenance upgrades, and our production environment can't give us maintenance windows. With VMware Cloud on AWS, this happens in the background."

Fit for infrastructure needs and scalability:

"For the applications running on VMware Cloud on AWS, we chose it based on a recommendation from AWS as far as our infrastructure needs, as well as our ability to scale without additional complexity."

Table 2 (next page) provides specifics about interviewed organizations' use of VMware Cloud on AWS as a part of their VMware-based hybrid cloud environments. As shown, study participants were running an average of 5,829 VMs in support of 78 business applications used by 27,807 end users. On average, VMware Cloud on AWS constituted 38% of study participants' VMware-based hybrid cloud environments, with more than three-quarters (78%) of VMware Cloud on AWS workloads migrated from on premises or on-premises private cloud environments; the remaining workloads were either moved from either hosted environments or other cloud environments or were net-new workloads.

TABLE 2

Use of VMware Cloud on AWS by Interviewed Organizations

	Average	Median
Number of VMs	5,829	786
Business applications	78	23
Number of users	27,807	3,250
VMware Cloud on AWS as a percentage of hybrid VMware environments (by percentage of VM/cloud instances)	38%	42%

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Business Value and Quantified Benefits of VMware Cloud on AWS

IDC's study shows that study participants have adopted VMware Cloud on AWS in the context of establishing VMware-based hybrid cloud environments as a cost-effective way to boost their overall IT agility, performance, and capabilities. They valued their ability to minimize the operational impact of migration by staying on a VMware-based platform and their ability to target areas of improvement in terms of agility, availability, and performance for specific workloads by having the capabilities of a VMware-based hybrid cloud platform.

Study participants offered comments about the most significant benefits of VMware Cloud on AWS for VMware Hybrid Cloud:

Ease of deployment and resiliency:

"For us, the ease of migration is the most significant benefit of VMware Cloud on AWS. As we move from on premises to cloud, it's been helpful for us to increase that speed of migration. There's also a benefit in terms of disaster recovery because VMware can pull applications back up if there is downtime."

Resiliency, ease of deployment, and management:
"VMware Cloud on AWS provides us with high resiliency and a robust disaster recovery environment that we could deploy with minimum extra skills. It's easy to deploy and easy to maintain and manage."

Ability to scale business needs cost-effectively:
"The biggest benefit for us of using VMware Cloud on AWS is having an on-demand service to support rapid business expansion. Without it, we'd need a lot of on-premises hardware and multiple datacenters."

Avoiding datacenter expansion; faster to serve business:
"We didn't want to expand our datacenters, and there was an efficiency at play with VMware Cloud on AWS to be quicker to market for our internal customers — it was just a better way for us to go."

Figure 1 (next page) presents IDC's calculations of benefits for study participants from using VMware Cloud on AWS, with average benefits of $771,200 per 100 VMs ($44.95 million per organization).

IDC's analysis shows that interviewed VMware customers will achieve benefits in the following areas:

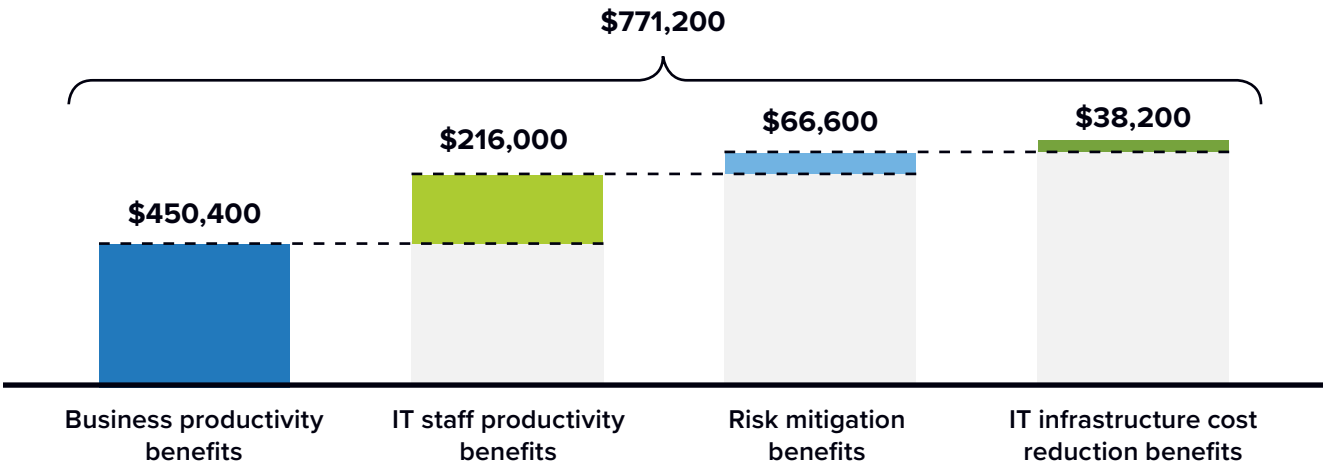
- **Business productivity benefits:**
  Study participants empower their business activities with greater flexibility and improved performance, helping keep existing customers and win new business opportunities. IDC puts the value of higher net revenue at an annual average of $450,400 per 100 VMs annually ($26.25 million per organization).
- **IT staff productivity benefits:**
  Study participants leveraged the strong functionality of VMware Cloud on AWS as well as existing VMware-based skills and capabilities to optimize the day-to-day work of IT infrastructure and application development teams. As a result, IDC projects that they will realize staff time savings and productivity gains worth an average of $216,000 per 100 VMs annually ($12.59 million per organization).
- **Risk mitigation benefits:**
  Study participants reduced the cost of lost employee productivity and revenue related to unplanned outages. IDC calculates that they will see benefits worth an average of $66,600 per 100 VMs in higher annual productivity and net revenue ($3.88 million per organization).

- **IT infrastructure cost reduction benefits:** Study participants avoid extending on-premises infrastructure and benefit from flexible consumption to optimize IT infrastructure costs. IDC estimates that they will save an average of $38,200 per 100 VMs annually ($2.23 million per organization).

FIGURE 1

Average Annual Benefits per 100 VMs

($ per organization per year)



n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

For an accessible version of the data in this figure, see Figure 1 Supplemental Data in Appendix 3.

Ease of Migrating Workloads to Cloud

The initial challenge for many organizations of generating value through the use of the public cloud and establishing hybrid cloud environments that allow for optimization of infrastructure environment by workload is cloud migration. Organizations understand that migrations to the cloud can be time-consuming and potentially resource-intensive endeavors and that failing to execute efficient migrations can create more drag on business operations than enablement, which can serve as a counterweight to expected cloud-based gains.

As noted, study participants saw their ability to carry out efficient and effective migrations to VMware Cloud on AWS from on-premises environments as a significant driver of adoption. Not only did they recognize that they would be able to leverage existing staff skills and experience but they knew that VMware Cloud on AWS would offer tools and optimized setups for ensuring efficient and minimally disruptive workload migrations. Importantly, they

saw the benefits for both workloads requiring more extensive refactoring and workloads ready for more of a lift-and-shift move to the public cloud when comparing the likely time and staff requirements for migration with another native public cloud environment.

Study participants detailed the importance they attached to ease of migration with VMware Cloud on AWS:

"We considered the time required for migration to the cloud in choosing VMware Cloud on AWS, specifically around the VMware application itself, because we already had the skills, knowledge, and experience."

"A lot of migration can be done in a single day with VMware Cloud on AWS for lift and shift, while trying to do that with native cloud would take two to three weeks because we would have to take the production environment into account."

Table 3 quantifies these migration benefits compared with another native public cloud environment. As shown, interviewed organizations reported requiring 52% less staff time overall to migrate equivalent applications to VMware Cloud on AWS, including 51% less time for applications requiring refactoring and 57% less time for lift-and-shift applications. This mean that study participants not only minimized operational friction and potential disruptions related to application migrations but required an average of 32.2 fewer full-time employees (FTEs) in staff time to effectuate their migrations to VMware Cloud on AWS, representing a substantial benefit in terms of staff time savings.

TABLE 3

Migration Metrics Versus Other Native Cloud Environment

Average per Organization	Other Public Cloud	With VMware Cloud on AWS	Difference	Benefit
Months to migrate — equivalent applications requiring refactoring	5.3	2.6	2.7	51%
Months to migrate — equivalent applications requiring lift and shift	4.2	1.8	2.4	57%
Total staff time in FTEs to migrate equivalent applications	61.5	29.3	32.2	52%
Value of staff time required to migrate equivalent applications	**$6.15M**	**$2.93M**	**$3.22M**	**52%**

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

As noted elsewhere in this study, interviewed organizations reported significant gains in operational efficiencies and employee productivity and higher revenue related to their use of VMware Cloud on AWS. As such, their ability to effectuate more timely migrations to the public cloud with VMware Cloud on AWS means that they are able to access these benefits at an earlier time, thereby compounding the benefits related to running applications on VMware Cloud on AWS.

Table 4 quantifies these benefits, including business value benefits associated with areas such as development team productivity gains, reduced unplanned downtime, and higher revenue. As shown, IDC calculated that study participants achieve an additional $8.36 million in these areas of value through faster migration with VMware Cloud on AWS ($143,400 per 100 VMs). Combined with staff time savings from more efficient migrations, this brings the total value to $11.58 million per organization ($198,700 per 100 VMs).

TABLE 4

Productivity and Business Gains from Faster Migration

Compared with Other Public Cloud	Per Organization	Per 100 VMs
Additional time to migrate equivalent applications	2.5 months (overall)	
Value of lost developer productivity	$1.24M	$21,200
Value of higher recognized revenue	$6.20M	$106,400
Value of higher revenue — unplanned downtime	$108,600	$1,900
Value of higher productivity — unplanned downtime	$808,400	$13,900
Total productivity/business value of faster migration	$8.36M	$143,400
Total value of faster migration — productivity/business value and staff time savings	**$11.58M**	**$198,700**

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Business and Operational Benefits

Study participants commented favorably on how VMware Cloud on AWS has served to enable their business operations in the context of establishing VMware-based hybrid cloud environments. These benefits relate to interviewed organizations' ability to take advantage

of improved IT agility, availability, and flexibility — as well as access to cost-effective IT resources — to provide higher-performing services and solutions to customers and to move at the speed and quality required by their customers. With VMware Cloud on AWS, they realize benefits not only through the ability to more easily scale up, test, validate, and deploy their business-critical applications but also from reducing the impact of application unavailability and by providing a better foundation for business growth.

Study participants elaborated on the benefits to their business operations and results:

Being faster to market generates higher revenue:

"Being faster with VMware Cloud on AWS gives us more opportunity to get things into the market. Before, when we had an idea, sometimes there were challenges to try it or obtain what we needed in terms of resources. But now, it's quite easy when we have a requirement from the customer; we can develop it almost two weeks faster than before … This has resulted in about a 5% gain in revenue."

Seamless platform for addressing business opportunities:

"VMware Cloud on AWS helps us address business opportunities because it gives us an environment that we can spin up, scale up, test, validate, and deploy with no implications to a physical site — it's all behind the scenes, and our business has no idea that it's being done in the cloud."

Ease of scaling and support for innovation:

"VMware Cloud on AWS gives us the ability to scale out and scale in much faster, and we can automate our scaling based on traffic or application use. Also, the features that we have access to give us the ability to easily try new things."

Greater flexibility to meet customer needs:

"In terms of reaching or meeting the demands of our customers, VMware Cloud on AWS has definitely given us the flexibility needed to address their needs. This has resulted in around 1% higher revenue."

From a day-to-day operational perspective, study participants reported benefiting from VMware Cloud on AWS providing a more reliable and available platform for running important business applications. Unplanned outages can be one of the biggest drains on employee productivity levels, and interviewed VMware customers reported reducing the frequency and duration of unplanned outages by running applications in the AWS Cloud instead of on-premises environments, which are more susceptible to human error. One interviewed VMware customer commented: *"We can definitely see that the number of incidents and amount of unplanned downtime has decreased since moving to VMware Cloud on AWS, and the last time we did a calculation, we found that it has decreased by about 40%. We haven't had any major incidents on VMware Cloud on AWS recently — it is definitely more stable."*

Table 5 provides key metrics in terms of unplanned downtime benefits of VMware Cloud on AWS. As shown, study participants experience an average of 82% fewer impactful outages and resolve those that occur 74% faster. Combined, this means a very strong 95% improvement in employee productivity lost because of unplanned outages and a nearly equally strong 90% reduction in revenue lost during operational disruptions.

TABLE 5

Impact on Unplanned Downtime KPIs

Average per Organization	Before/Without VMware Cloud on AWS	With VMware Cloud on AWS	Difference	Benefit
Number of unplanned outages per year	7.1	1.3	5.8	82%
Mean time to repair (hours)	5.5	1.4	4.1	74%
Hours of productive time lost per user per year	4.0	0.2	3.8	95%
Productivity loss per year in FTEs per organization	58.5	2.7	55.7	95%
Value of lost productivity time per organization per year	$4.09M	$192,000	$3.90M	95%
Value of lost revenue per organization per year	**$3.89M**	**$394,800**	**$3.49M**	**90%**

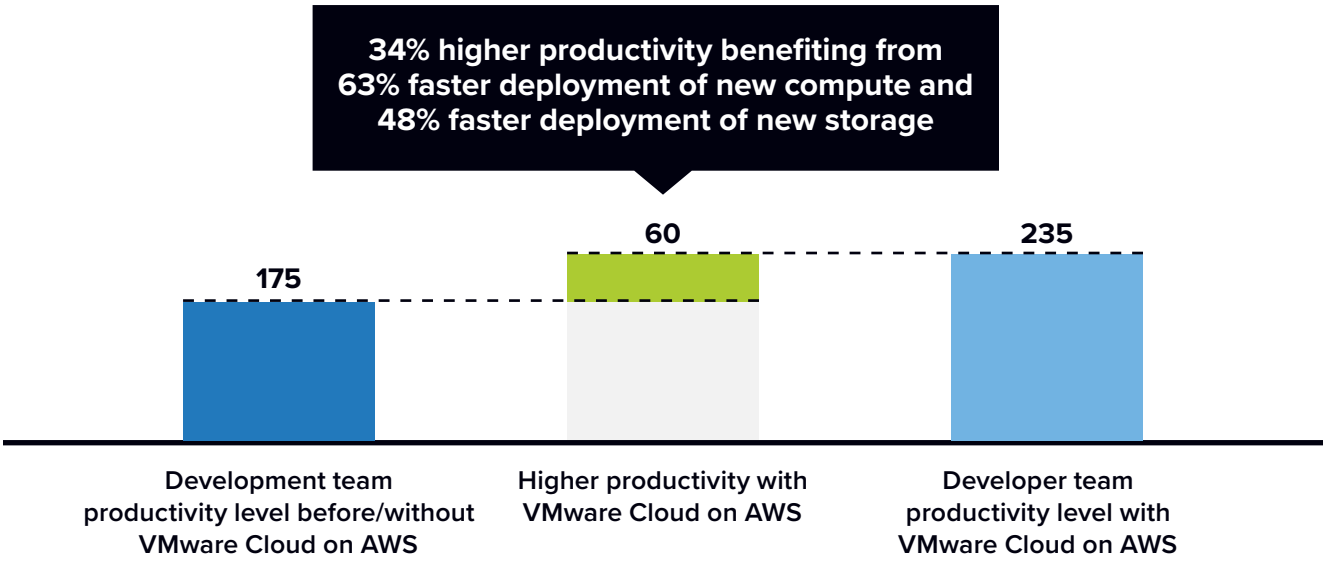
n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Study participants also attributed significant value to the ways in which VMware Cloud on AWS has enabled their application development activities. In particular, the ability to more readily provide compute and other IT resources as needed by developers reduces the overall friction affecting development efforts. Interviewed organizations reported that they can deliver new compute resources 63% faster on average with VMware Cloud on AWS, which limits the extent to which development teams find themselves slowed by the inability to access needed IT resources. In turn, this speeds up their delivery cadence and increases their overall bandwidth, contributing to an average 34% increase in development team productivity levels (see **Figure 2**, next page).

FIGURE 2

Impact on Development Team Productivity

(Equivalent developer productivity, FTEs per organization)



n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

For an accessible version of the data in this figure, see Figure 2 Supplemental Data in Appendix 3.

Taken together, the varied benefits of VMware Cloud on AWS, including better agility, scalability, and management capabilities, contribute to improved business results by enabling study participants to better address business opportunities and meet customer expectations. Study participants consistently noted that they move faster and with greater quality levels in addressing customer needs, resulting in substantial business gains. As one study participant noted: *"Whatever we do with VMware Cloud on AWS either increases the revenue or provides new revenue streams to the business. If we average a 30% efficiency, then I think we could see at least a 5% increase in revenue."* Another interviewed VMware customer commented on the value of flexibility in meeting customer demand: *"With VMware Cloud on AWS, we can add extra capacity when needed, such as for a new campaign, or when we need things calculated, we can add functionality or capacity, and we can lower it during weekends or evening hours. Cost and flexibility are things from which our stores have benefited."*

Table 6 (next page) shows the significant revenue gains through business enablement that study participants are achieving with VMware Cloud on AWS, with $199.52 million in higher average annual revenue per organization ($3.42 million per 100 VMs).

TABLE 6

Business Enablement — Higher Revenue

	Per Organization	Per 100 VMs
Higher revenue per year	$199.52M	$3.42M
Assumed operating margin	15%	15%
Higher net revenue per year	**$29.93M**	**$513,400**

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Benefits from Cost and Staff Efficiencies

Study participants also spoke in detail about the cost and staff efficiency benefits of using VMware Cloud on AWS to establish and run VMware-based hybrid cloud environments. These organizations found that use of the VMware platform helped their IT staff perform more effectively and efficiently. In large measure, they attributed efficiencies to using a public cloud solution in conjunction with an existing on-premises environment that they can operate efficiently with existing tools and skill sets. This knowledge transfer benefit fostered easy migration and IT resource management and improved the flexibility and agility needed to add or remove resources on demand as business requirements evolved, while additional capabilities of the VMware Cloud on AWS platform support even greater efficiency levels.

Study participants also appreciated the cost-effectiveness of VMware Cloud on AWS, which they realize through optimizing spending on IT resources and minimizing the need for third-party consulting.

Interviewed VMware customers elaborated on the following benefits:

Infrastructure and consulting cost efficiencies:

"Compared with on premises, the cost with VMware Cloud on AWS is lower by around 20%. Also, an on-premises solution would have had additional consulting costs because there were a lot of complexities."

Cost-effectiveness and predictable costs:

"Cost-effectiveness is an important benefit of VMware Cloud on AWS, including the ability to be transparent about costs for budgeting. Previously, when everything was on premises, it was much more difficult to anticipate costs because we had to add new servers all the time because we were growing."

More efficient to manage:

"Our IT infrastructure team spends less time on day-to-day work compared with what they were spending on the datacenter. They are investing that in developing their skills and putting new ideas and new applications into the business. There's more productivity."

Ability to run parallel environments with skills applied across both:

"With VMware Cloud on AWS, we can run applications parallel with our on-premises environment, so we can load balance without any loss of service or performance because both environments are VMware. Also, the engineers don't need to know multiple environments."

IDC validated these observations by calculating IT infrastructure team efficiencies. Study participants reported that they benefit from the reduced burden of managing on-premises infrastructure and from the functionality and capabilities of VMware Cloud on AWS. **Table 7** quantifies various improvements in IT team efficiency, with study participants often being able to accommodate business growth or reallocate staff time. One study participant noted: *"VMware Cloud on AWS can be less of a burden when we have to troubleshoot. Also, we're continually being tasked to do more with the same staff, and our staff saves time with VMware Cloud on AWS. For example, our infrastructure team saves time — probably 10 staff members save 80% with VMware Cloud on AWS."* As shown, interviewed VMware customers reported a 32% average efficiency improvement for their IT infrastructure teams to manage and support equivalent workloads.

TABLE 7

IT Infrastructure Team Efficiencies

Average per Organization	Before/Without VMware Cloud on AWS	With VMware Cloud on AWS	Difference	Benefit
Equivalent FTEs required for same workloads	179.8	122.5	57.3	32%
Staff hours per VM per year	58	40	18	32%
Value of equivalent FTE time required (dollars per organization per year)	**$17.98M**	**$12.25M**	**$5.73M**	**32%**

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

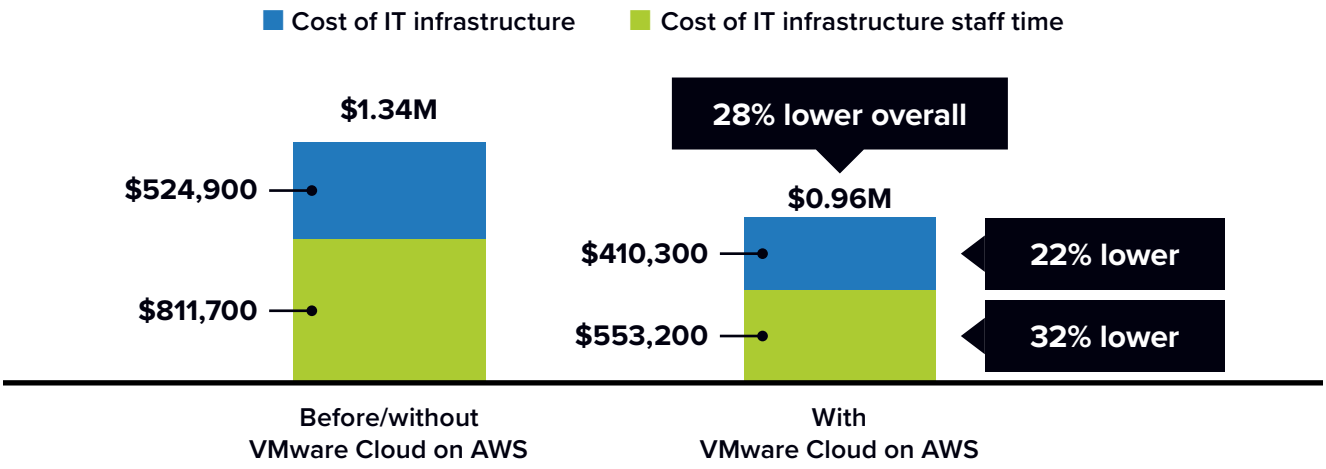
Study participants also attributed infrastructure-related cost efficiencies to their use of VMware Cloud on AWS compared with on-premises infrastructure. They commented that VMware Cloud on AWS has proven to be cost-effective because its functionality is delivered as a managed service with pay-as-you-go pricing and no up-front financial commitments. They have benefited from more closely tailoring compute and storage capacity to real-world requirements and avoiding the need to make capital expense investments in hardware.

The results of IDC's overall cost of operations analysis are presented in **Figure 3.** As shown, IDC calculates that, over a projected three-year period, study participants can run equivalent applications and workloads on VMware Cloud on AWS at a 28% lower cost when compared with previous or alternative approaches. On a per 100 VM basis, this means that study participants will save $380,000 over a three-year period ($21.75 million in savings per organization over three years).

FIGURE 3

Impact on Cost of Operations Over Three Years per 100 VMs

($ per 100 VMs over three years)



n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

For an accessible version of the data in this figure, see Figure 3 Supplemental Data in Appendix 3.

ROI Summary

Table 8 (next page) presents IDC's ROI analysis for study participants' use of VMware Cloud on AWS to establish VMware-based hybrid cloud environments. As shown, IDC projects that these organizations will achieve three-year discounted benefits worth an average of $106.22 million per organization ($1.82 million per 100 VMs) through lower IT infrastructure costs, IT staff efficiencies, higher productivity levels for developers and other employees, and improved business performance. These benefits compare with total three-year discounted investment costs of $23.06 million per organization ($0.35 million per 100 VMs). These levels of benefits and investment costs are projected to result in an average three-year ROI of 361% and a break-even point in their investment occurring in an average of six months.

TABLE 8

Three-Year ROI Analysis

	Per Organization	Per 100 VMs
Benefit (discounted)	$106.22M	$1.82M
Investment (discounted)	$23.06M	$0.35M
Net present value (NPV)	$83.15M	$1.43M
ROI (NPV/investment)	361%	361%
Payback period	6 months	6 months
Discount factor	12%	12%

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Challenges/Opportunities

One of the largest inhibitors to cloud adoption is the expertise necessary to migrate and modernize existing datacenter workloads. Many enterprises are finding it difficult to hire staff with these sought-after skill sets and will often look to external consultants or solution integrators for help.

Given VMware's experience in the datacenter, the company can address this skills gap by providing tools that are familiar to infrastructure administrators. By creating a common layer across on-premises locations and public clouds, it is possible to move workloads with fewer modifications.

A common platform such as VMware Cloud on AWS also increases the portability of applications, which is valuable when optimizing for cost, availability, and performance.

Conclusion

Many enterprises view hybrid cloud as a path for achieving the flexibility, scalability, and performance that their digital business applications and services require. Hybrid cloud can enable them to choose the infrastructure approach that best suits the requirements of specific applications and services in terms of factors such as cost, security, availability, scalability, and performance. However, organizations' efforts to implement hybrid cloud infrastructures can be impeded by migration and ongoing operational challenges inherent to establishing a net-new infrastructure environment in the cloud. This study evaluates the impact for organizations of using VMware Cloud on AWS to deliver a public cloud environment that complements their existing VMware-based on-premises environments.

Interviewed organizations valued VMware Cloud on AWS providing them with an efficient migration path to the public cloud by allowing them to leverage existing staff knowledge and tools, as well as AWS optimization for VMware workload migrations. As a result, they incur lower overall migration costs and can benefit at an earlier time from VMware Cloud on AWS. Meanwhile, on an ongoing basis, by moving applications and workloads that benefit most from cloud agility, availability, and performance, interviewed VMware customers generate significant value in cost savings, staff efficiencies, and business gains.

Overall, customers credited VMware Cloud on AWS as providing an optimized infrastructure foundation that resulted in a reduction in unplanned downtime and improved scalability for the applications and services they have migrated to the platform as compared with an on-premises environment. IDC projects that these benefits will allow study participants to realize an average three-year ROI of 361% on their investment in VMware Cloud on AWS with a six-month average payback period.

Appendix 1: Methodology

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of VMware Cloud on AWS in the context of establishing and running VMware-based hybrid cloud environments as the foundation for the model.

Based on interviews with organizations using VMware Cloud on AWS, IDC performed a three-step process to calculate the ROI and payback period:

1. **Gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of VMware Cloud on AWS.** In this study, the benefits included IT cost reductions and avoidances, staff time savings and productivity benefits, and revenue gains.
2. **Created a complete investment (three-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using VMware Cloud on AWS and can include additional costs related to migrations, planning, consulting, and staff or user training.
3. **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of VMware Cloud on AWS over a three-year period. ROI is the ratio of the net present value and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and productivity savings. For the purposes of this analysis, IDC has used assumptions of an average fully loaded salary of $100,000 per year for IT staff members and an average fully loaded salary of $70,000 per year for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).
- The net present value of the three-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.
- Because use of VMware Cloud on AWS requires a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

Appendix 2: Business Value Calculations

Table 9 provides a detailed view of the quantified benefits that study participants will achieve through their use of VMware Cloud on AWS, which IDC puts at an annual average of $44.95 million per organization.

TABLE 9

Average Annual Benefits

Category of Value	Average Quantitative Benefit	Calculated Average Annual Value*
Annualized infrastructure cost savings	22% lower costs, saving $2.54M per year	$2.23
IT infrastructure team efficiencies	32% efficiency, 57.3 FTE gain, $100,000 salary	$5.02M
IT security team efficiencies	23% efficiency, 5.0 FTE gain, $100,000 salary	$436,300
Application development team productivity gains	34% productivity gain, 59.6 FTE gain, $100,000 salary	$5.23M
Help desk team efficiencies	56% efficiency, 21.7 FTE gain, $100,000 salary	$1.90M
Unplanned downtime — productivity gains	95% less unplanned downtime, saving 3.8 hours per user, 55.7 FTE gain, $70,000 salary	$3.42M
Unplanned downtime — net revenue gains	$3.49M higher revenue per year, 15% margin assumption	$459,400
Business enablement — net revenue gains	$199.52M higher revenue per year, 15% margin assumption	$26.25M
Total average annual benefits	**$44.95M per organization**	

*Includes 6.1 average months deployment time in year 1.

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Appendix 3: Supplemental Data

This appendix provides an accessible version of the data for the complex figures in this document. Click "Return to original figure" below each table to get back to the original data figure.

FIGURE 1 SUPPLEMENTAL DATA

Average Annual Benefits per 100 VMs

	Amount
Business productivity benefits	$450,400
IT staff productivity benefits	$216,000
Risk mitigation benefits	$66,600
IT infrastructure cost reduction benefits	$38,200
Total	**$771,200**

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Return to original figure

FIGURE 2 SUPPLEMENTAL DATA

Impact on Development Team Productivity

	FTEs per organization
Development team productivity level before/without VMware Cloud on AWS	175
Developer team productivity level with VMware Cloud on AWS	235
Higher productivity with VMware Cloud on AWS	**60** **(34% higher productivity benefiting from 63% faster deployment of new compute and 48% faster deployment of new storage)**

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Return to original figure

Appendix 3: Supplemental Data (continued)

FIGURE 3 SUPPLEMENTAL DATA

Impact on Cost of Operations Over Three Years per 100 VMs

	Before/without VMware Cloud on AWS	With VMware Cloud on AWS	Benefit
Cost of IT infrastructure	$524,900	$410,300	22% lower
Cost of IT infrastructure staff time	$811,700	$553,200	32% lower
Overall benefit	**$1.34M**	**$0.96M**	**28% lower**

n = 7; Source: IDC Business Value In-Depth Interviews, January 2024

Return to original figure

About the IDC Analysts

Dave McCarthy
Research Vice President, Cloud and Edge Infrastructure Services, IDC

Dave McCarthy is a vice president within IDC's worldwide infrastructure practice,where he leads a team of analysts covering shared (public) cloud, dedicated (private) cloud, and edge strategies. Benefiting both technology suppliers and IT decision makers, Dave's insights delve into how hybrid and distributed cloud platforms provide the foundation for next-generation workloads, enabling organizations to innovate faster, automate operations, and achieve digital resiliency. His research is available via syndicated research programs (subscription services), data products (IDC Trackers), and custom engagements.

More about Dave McCarthy

Matthew Marden
Research Vice President, Business Value Strategy Practice, IDC

Matthew is responsible for carrying out custom business value research engagements and consulting projects for clients in a number of technology areas with a focus on determining the return on investment of their use of enterprise technologies. Matthew's research often analyzes how organizations are leveraging investment in digital technology solutions and initiatives to create value through efficiencies and business enablement.

More about Matthew Marden

IDC Custom Solutions

IDC Custom Solutions produced this publication. The opinion, analysis, and research results presented herein are drawn from more detailed research and analysis that IDC independently conducted and published, unless specific vendor sponsorship is noted. IDC Custom Solutions makes IDC content available in a wide range of formats for distribution by various companies. This IDC material is licensed for external use and in no way does the use or publication of IDC research indicate IDC's endorsement of the sponsor's or licensee's products or strategies.

IDC Research, Inc.
140 Kendrick Street, Building B, Needham, MA 02494, USA
T +1 508 872 8200

idc.com @idc @idc

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries. IDC's analysis and insight helps IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives.