

NEW TECH

# New Technology: The Projected Total Economic Impact™ Of HPE Compute Ops Management

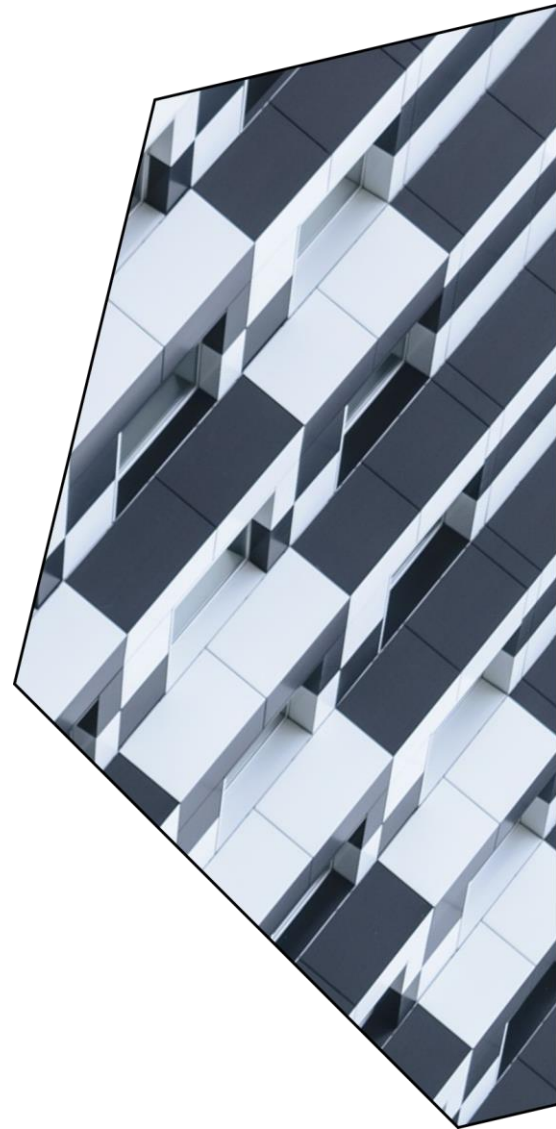
Cost Savings And Business Benefits  
Enabled By HPE Compute Ops Management

JUNE 2024

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# Executive Summary

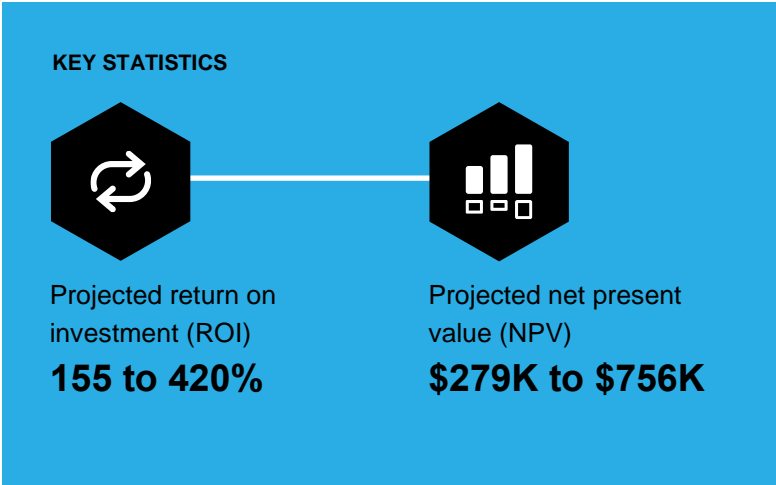
HPE Compute Ops Management allows server management teams to complete firmware patches and updates faster and more efficiently. Customers report that with Compute Ops Management, their IT teams cut the time and costs required to manage remote servers. Server management teams can focus on higher-value tasks, remote server downtime is minimized, and overall security posture improves.

HPE Compute Ops Management allows IT teams to easily monitor, manage, and update HPE compute devices, such as HPE ProLiant servers, remotely through a cloud-based console. Compute Ops Management is a cloud-based application that simplifies HPE compute device management across the device lifecycle.

HPE commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Compute Ops Management.<sup>1</sup> The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Compute Ops Management on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed representatives from five companies with experience using Compute Ops Management and surveyed 226 respondents with experience managing HPE ProLiant servers. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the survey results. We represent the findings through a single composite organization with revenue of \$1 billion per year using Compute Ops Management to manage 300 remote servers.

Prior to using Compute Ops Management, these interviewees noted how their organizations struggled to manage remote servers. Firmware updates and patches were time-consuming, inefficient, and difficult



to complete within a specified maintenance window. Planned and unplanned server downtime was excessive, disrupting operations. The inability to complete patches and updates in a timely fashion led to potential security vulnerabilities.

After the investment in Compute Ops Management, the interviewees found that remote server management was more efficient, saving the IT team time. The failure rate for updates and patches was reduced and server downtime minimized. The server management team spent less time traveling to address remote sever issues. Overall security posture improved.

### KEY FINDINGS

**Quantified projected benefits.** Three-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Reduced time managing remote servers 38% to 75%.** The composite organization's IT team saves significant time managing edge servers with Compute Ops Management.
- **Saved \$16,000 to \$50,000 PV in travel costs over three years.** With Compute Ops Management, the composite organization can complete server management tasks remotely that had previously required an IT team member to travel to the edge server location.
- **Avoided server downtime of 3.0 to 4.8 hours per server per year.** With Compute Ops Management, edge server downtime is minimized for the composite organization.
- **Decommissioned other server management tools for up to \$102,000 PV savings over three years.** The composite organization is able to decommission other server management tools after deploying Compute Ops Management.



### Server management time savings

**38% to 75%**

**Unquantified benefits.** Benefits that provide value for the composite organization but are not quantified for this study include:

- **Enhanced security posture.** With Compute Ops Management, the composite organization improves its overall security with faster patching and a secure server management portal. Patching is continuous, eliminating security vulnerabilities.
- **Consolidated overview of server performance.** Compute Ops Management provides dashboards with an overview of server performance and compliance. The composite

**“We needed a new patching system for our remote offices. Patching was our biggest pain point. We needed a system to patch our HPE servers and keep the hardware’s firmware and iLO firmware up to date.”**

*Systems engineer, financial services*

organization's IT team can work more effectively now that all the information on server performance and compliance is on one dashboard.

- **Easier to onboard new IT employees.** The composite organization onboards new IT employees managing servers faster with Compute Ops Management since the platform is easy to learn.
- **Improved IT employee morale.** With Compute Ops Management, the composite organization's IT team spends less time on evenings and weekends updating servers.

**Costs.** Three-year, risk-adjusted PV costs for the composite organization include:

- **Compute Ops Management subscription cost, \$118,000 PV over three years.** The composite organization pays HPE an annual subscription fee for Compute Ops Management. The subscription cost varies based on the number of servers managed with Compute Ops Management.
- **Implementation and maintenance cost, \$62,000 PV over three years.** The composite organization's internal IT team spends a modest

amount of time planning, testing, implementing, and maintaining Compute Ops Management.

- **Training cost.** The composite organization’s IT team spends 4 hours each on initial training to use Compute Ops Management and 1 hour per year subsequently.

Forrester modeled a range of projected low-, medium-, and high-impact outcomes based on evaluated risk. The table below summarizes the cash flows from the benefits and costs associated with an investment in Compute Ops Management. Positive cash flows reflect the value of the four quantified benefits and negative cash flow reflect the associated costs.

This financial analysis projects that the composite organization accrues the following three-year net

present value (NPV) for each scenario by enabling Compute Ops Management:

- Projected low impact of \$279,000 NPV and projected ROI of 155%.
- Projected medium impact of \$500,000 NPV and projected ROI of 277%.
- Projected high impact of \$756,000 NPV and projected ROI of 420%.

These results are for the composite organization. To generate a custom ROI for your organization, please click here [HPE Compute Ops Management ROI Estimator](#).

<b>Cash Flow Analysis (Risk-Adjusted Estimates)</b>						
	<b>Initial</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Total</b>	<b>Present Value</b>
Total costs	(\$28,042)	(\$61,160)	(\$61,160)	(\$61,160)	(\$211,523)	(\$180,139)
Total benefits (low)	\$0	\$184,750	\$184,750	\$184,750	\$554,250	\$459,456
Total benefits (mid)	\$0	\$265,500	\$278,000	\$278,000	\$821,500	\$679,982
Total benefits (high)	\$0	\$360,600	\$385,600	\$385,600	\$1,131,800	\$936,203
Net benefits (low)	(\$28,042)	\$123,590	\$123,590	\$123,590	\$342,727	\$279,307
Net benefits (mid)	(\$28,042)	\$204,340	\$216,840	\$216,840	\$609,977	\$499,843
Net benefits (high)	(\$28,042)	\$299,440	\$324,440	\$324,440	\$920,277	\$756,064
PROI (low)						155%
PROI (mid)						277%
PROI (high)						420%



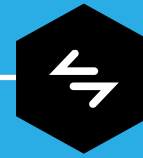
PROI  
**155% to 420%**



PROJECTED BENEFITS PV  
**\$459K to \$936K**

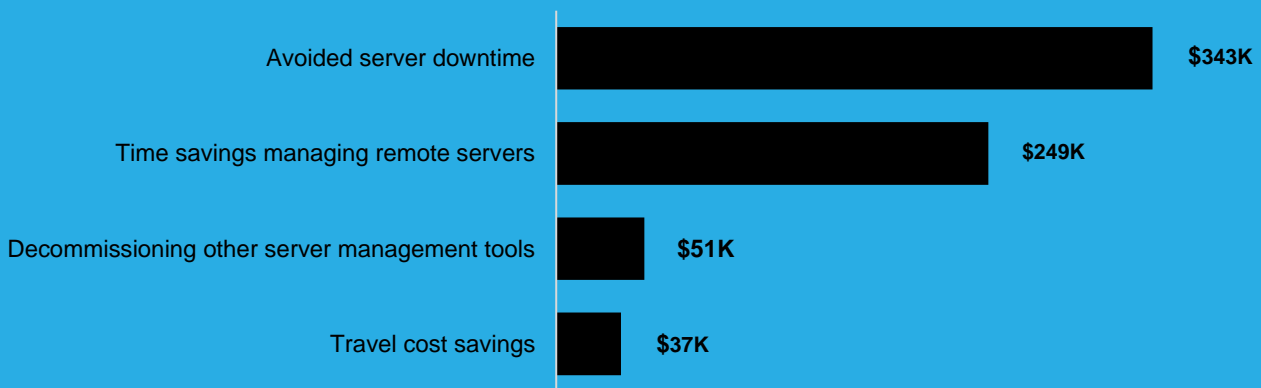


PROJECTED NPV  
**\$279 to \$756K**



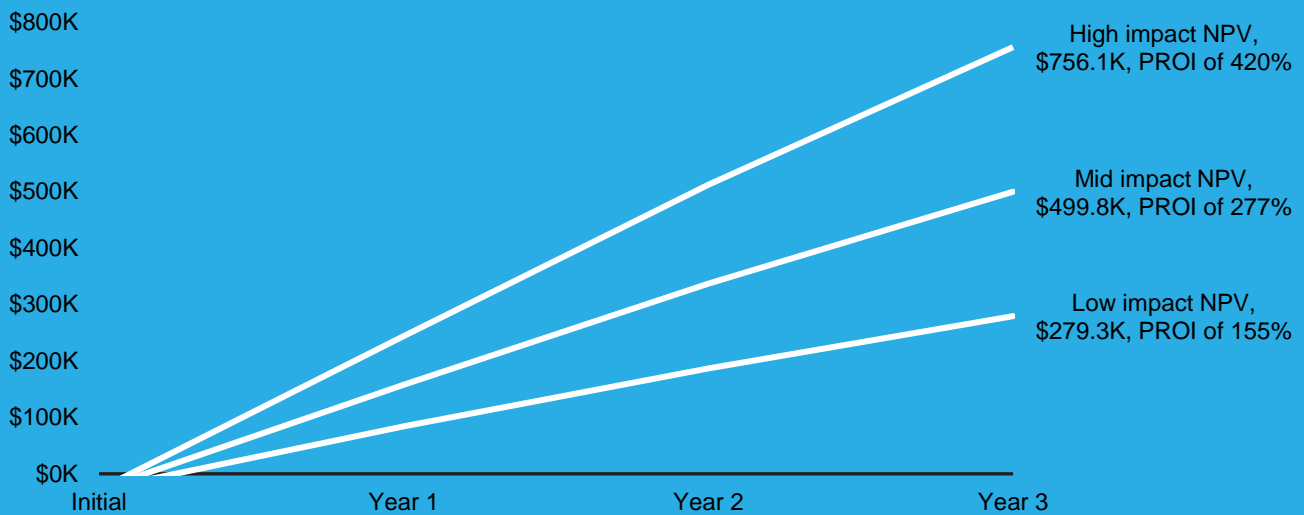
TOTAL COSTS  
**\$180K**

### Projected Benefits (Three-Year)



*Figures in chart are projections for the mid-case scenario*

### Three-Year Projected Financial Analysis For The Composite Organization



## NEW TECH TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a New Technology: Projected Total Economic Impact™ (New Tech TEI) framework for those organizations considering an investment in Compute Ops Management.

The objective of the framework is to identify the potential cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the projected impact that Compute Ops Management can have on an organization.

### DISCLOSURES

Readers should be aware of the following:

This study is commissioned by HPE and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in HPE Compute Ops Management.

HPE reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

HPE provided the customer names for the interviews but did not participate in the interviews.



### DUE DILIGENCE

Interviewed HPE stakeholders and Forrester analysts to gather data relative to Compute Ops Management.



### EARLY-IMPLEMENTATION INTERVIEWS AND SURVEY

Interviewed five representatives at organizations using Compute Ops Management and surveyed 226 respondents managing HPE ProLiant servers to obtain data with respect to projected costs, benefits, and risks.



### COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewees' organizations.



### PROJECTED FINANCIAL MODEL FRAMEWORK

Constructed a projected financial model representative of the interviews using the New Tech TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewees.



### CASE STUDY

Employed four fundamental elements of New Tech TEI in modeling the investment's potential impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

# The Compute Ops Management Customer Journey

■ Drivers leading to the Compute Ops Management investment

Interviews			
Role	Industry	Region	Edge Servers Managed With Compute Ops Management
Director, infrastructure and end-user computing	Hospitality	Global	800
Systems engineer	Financial services	Global	100
Systems engineer	Professional services	US	100
Team leader, IT data center	Construction	Germany	20
CTO	Professional services	Spain	20

## KEY CHALLENGES

Before the implementation of Compute Ops Management, the interviewees' organizations used a variety of server management tools, but these were not optimal for edge server management.

The interviewees noted how their organizations struggled with common challenges, including:

- **Remote server maintenance was inefficient.** Patches and firmware updates could not be successfully completed within the specified maintenance window. There was a relatively high failure rate for patches, and servers would time out during the update, requiring the process to be restarted.

The systems engineer, professional services, shared: "Firmware updates were a big thing for us. We wanted to be current. With our prior system, that was difficult because the updates could not be completed within the maintenance window. It just dragged things out, and it took forever."

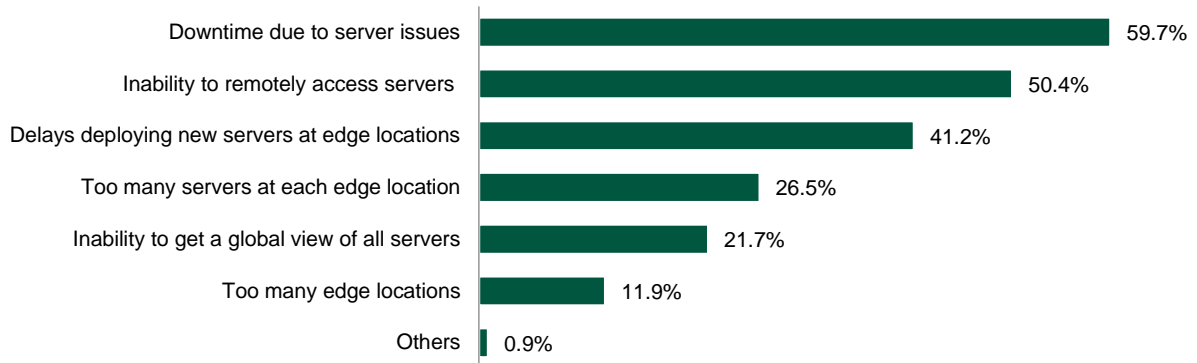
- **IT team morale suffered.** The server management team regularly devoted nights and weekends to time-consuming patches and firmware updates.

**"Our previous main patching tool had some pretty major flaws in it that resulted in timeouts. The way the old tool worked is that if there was even a millisecond of latency, it would just cancel the entire upgrade and you would start from scratch. We could only update three or four offices overnight because of the failures."**

*Systems engineer, financial services*

- **Delays in firmware patches and updates created security vulnerabilities.** Before Compute Ops Management, it could take weeks to update edge servers for firmware patches and updates. This left the interviewees' organizations vulnerable to security breaches, especially to zero-day issues that required speedy remediation.

**“What infrastructure challenges is your organization experiencing when it comes to HPE server management?”**



Base: 226 IT and system administration decision-makers responsible for server management  
 Source: A commissioned study by Forrester Consulting on behalf of HPE, April 2024

**COMPOSITE ORGANIZATION**

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an ROI analysis that illustrates the areas financially affected. The composite organization is representative of the five interviewees and the 226 survey respondents, and it is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

**Description of composite.** The composite organization is a global organization with \$1 billion annual revenue and 4,000 employees.

**Deployment characteristics.** The composite organization has 1,000 on-premises servers: 700 (70%) are centrally located in data centers and 300 (30%) are at remote edge locations. All 300 remote servers are HPE ProLiant Gen 10 or higher servers. There are 250 remote edge locations including offices, manufacturing facilities, and retail locations. Each remote location has one to two servers, averaging 1.2 servers per remote location. One IT FTE is required to manage every 150 remote servers before deploying Compute Ops Management.

The composite organization spends three months planning and testing Compute Ops Management before implementation.

**Key Assumptions**

- **\$1 billion annual revenue**
- **2 FTEs managing remote servers**
- **300 remote servers**

# Analysis Of Benefits

■ Quantified benefit data as applied to the composite

Total Projected Benefits					
Benefit	Year 1	Year 2	Year 3	Total	Present Value
Total projected benefits — Low	\$184,750	\$184,750	\$184,750	\$554,250	\$459,446
Total projected benefits — Mid	\$265,500	\$278,000	\$278,000	\$821,500	\$679,982
Total projected benefits — High	\$360,600	\$385,600	\$385,600	\$1,131,800	\$936,203

## TIME SAVINGS MANAGING REMOTE SERVERS

**Evidence and data.** The interviewees' IT teams saved significant amounts of time managing edge servers with Compute Ops Management. They were able to deploy the time saved to higher-value tasks.

- Before Compute Ops Management, the interviewees would update firmware monthly or quarterly. Now, firmware is updated continuously. Before, servers would time out during the update process, requiring IT to restart the update. This made it difficult to complete updates within a specified maintenance window.

- The systems engineer, financial services, noted: "Firmware updates were a big thing for us. We wanted to be current. With our prior system that was difficult because updates could not be completed within the maintenance window. It just dragged things out, and it took forever."
- He added: "We needed a new patching system for our remote offices. Patching was our biggest pain point. We needed a system to patch our HPE servers and keep the hardware's firmware and iLO [Integrated Lights-Out] firmware up to date."
- With Compute Ops Management, the success rate of patches improved. The systems engineer, financial services, noted: "We are at a 99% success rate of patching. There are almost no failures. I wouldn't hesitate to say that we're at 100% success rate on patches, which is awesome."
- The director of infrastructure and end-user computing, hospitality, added: "Compute Ops Management gives us the ability to keep all our firmware updated much easier. Our failure rate dropped to practically nothing from 5% to 6% previously."
- The CTO, professional services, shared: "The main benefit is resource savings. We have more

**"A firmware update used to be 4, 6, or 8 hours. Now with Compute Ops Management, it's 45 minutes to an hour. We're really excited about Compute Ops Management because it does all the things it should do."**

*Systems engineer, professional services*

resources for other activities [with Compute Ops Management].”

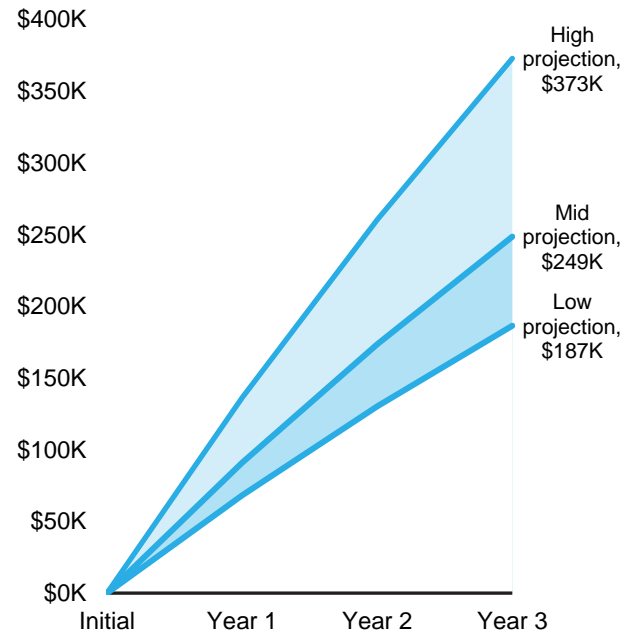
- He added that Compute Ops Management provided flexible server management: “[Compute Ops Management] was helpful because we can monitor and remotely manage the devices. When I’m traveling, I can see how the servers are performing and turn them off and on from my smartphone without getting connected to my own network.”

**Modeling and assumptions.** For the analysis, Forrester assumes the following for the composite organization:

- In the low-impact scenario, the IT team saves 38% of their time spent managing edge servers.
- In the mid-impact scenario, the IT team saves 50% of their time spent managing edge servers.
- In the high-impact scenario the IT team saves 75% of their time spent managing edge servers.

**Results.** This yields a three-year projected PV ranging from \$186,514 (low) to \$373,028 (high).

**Time Savings Managing Remote Servers Module: Range Of Three-Year Cumulative Impact, PV**



Time Savings Managing Remote Servers					
Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	IT FTEs managing remote servers before Compute Ops Management	Composite	2.0	2.0	2.0
A2	Percentage of edge servers managed with Compute Ops Management	Composite	100%	100%	100%
A3			37.5%	37.5%	37.5%
A3	Time savings managing remote servers with Compute Ops Management	Interviews	50.0%	50.0%	50.0%
A3			75.0%	75.0%	75.0%
A4	Annual IT salary, including benefits	Interviews	\$100,000	\$100,000	\$100,000
A5	Productivity recapture	TEI standard	100%	100%	100%
<b>At<sub>Low</sub></b>			<b>\$75,000</b>	<b>\$75,000</b>	<b>\$75,000</b>
<b>At<sub>Mid</sub></b>	<b>Time savings managing remote servers</b>	<b>A1*A2*A3*A4*A5</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>
<b>At<sub>High</sub></b>			<b>\$150,000</b>	<b>\$150,000</b>	<b>\$150,000</b>
<b>Three-year projected total: \$225,000 to \$450,00</b>			<b>Three-year projected present value: \$186,514 to \$373,028</b>		

### TRAVEL COST SAVINGS

**Evidence and data.** The interviewees reported that they could remotely complete server management tasks with Compute Ops Management that previously required an IT team member to travel to the remote server location. The interviewees’ organizations were able to save time and travel costs with Compute Ops Management.

- Before Compute Ops Management, IT team travel to a remote location was most commonly related to opening a new remote location — for example, opening a new office in a new city. One of the interviewees’ organizations was growing and opening 10 new offices per year. The company’s IT team traveled to those new offices to install and set up new remote servers.
- The systems engineer, financial services, shared, “The main cost was time out of the IT team’s schedule.”
- Not all the interviewees experienced travel cost savings with Compute Ops Management. A few of the interviewees did not experience situations that required their IT team to travel to a remote location to install or upgrade a remote server before implementing Compute Ops Management. Some edge server issues were covered by the HPE ProLiant maintenance agreement, while other routine issues were handled by local contracted support services.

**Modeling and assumptions.** For the analysis Forrester assumes the following for the composite organization:

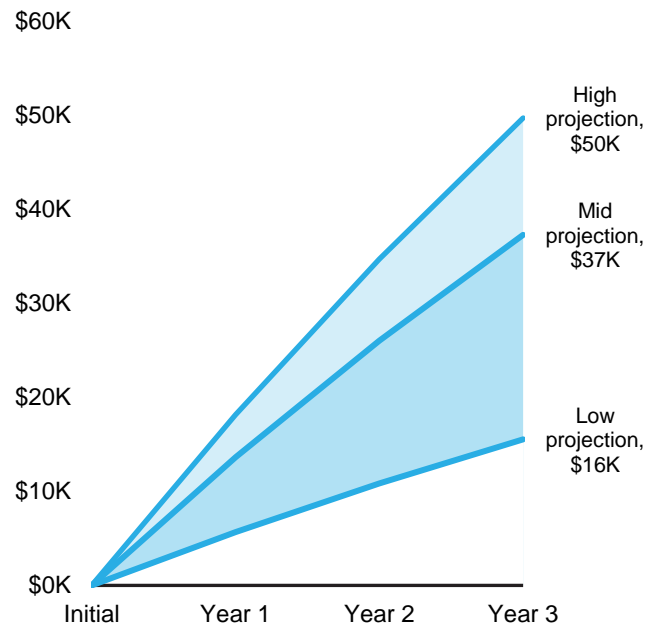
- The composite organization has 250 locations with edge servers: 200 locations have one server, and 50 locations have two servers, so there are 1.2 servers on average at each remote location.
- Ten percent of locations require an IT visit each year to install a new remote server or address a remote server issue before Compute Ops

Management. These 25 trips per year are avoided with Compute Ops Management because the IT team can solve issues remotely.

- The cost of an avoided trip includes both the cost of the IT team’s time and avoided travel costs. For example, we estimate the mid-impact cost of \$600 per trip as 4 hours of IT team time at \$48 per hour plus \$400 in travel expenses.
- The low-impact scenario reflects shorter time commitment and lower travel costs. Each avoided trip saves the composite organization \$250.
- In the mid-impact scenario, each avoided trip saves the composite organization \$600.
- In the high-impact scenario reflects a longer time commitment and higher travel costs. Each avoided trip saves the composite organization \$800.

**Results.** This yields a three-year projected PV ranging from \$15,543 (low) to \$49,737 (high).

**Travel Cost Savings Module: Range Of Three-Year Cumulative Impact, PV**



<b>Travel Cost Savings</b>					
<b>Ref.</b>	<b>Metric</b>	<b>Source</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
B1	Remote servers	Composite	300	300	300
B2	Remote servers per edge location	Composite	1.2	1.2	1.2
B3	Remote server locations	B1/B2	250	250	250
B4	Remote server locations requiring a service visit before Compute Ops Management	Interviews	10%	10%	10%
B5	Annual IT visits to remote locations for server setup or maintenance before Compute Ops Management (rounded)	B3*B4	25	25	25
B6			\$250	\$250	\$250
B6	IT team travel to remote locations (cost per trip)	Industry research	\$600	\$600	\$600
B6			\$800	\$800	\$800
<b>Bt<sub>Low</sub></b>			<b>\$6,250</b>	<b>\$6,250</b>	<b>\$6,250</b>
<b>Bt<sub>Mid</sub></b>	<b>Travel cost savings</b>	<b>B5*B6</b>	<b>\$15,000</b>	<b>\$15,000</b>	<b>\$15,000</b>
<b>Bt<sub>High</sub></b>			<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>
<b>Three-year projected total: \$18,750 to \$60,000</b>		<b>Three-year projected present value: \$15,543 to \$49,737</b>			

### AVOIDED SERVER DOWNTIME

**Evidence and data.** The interviewees found that with Compute Ops Management, edge server downtime was minimized.

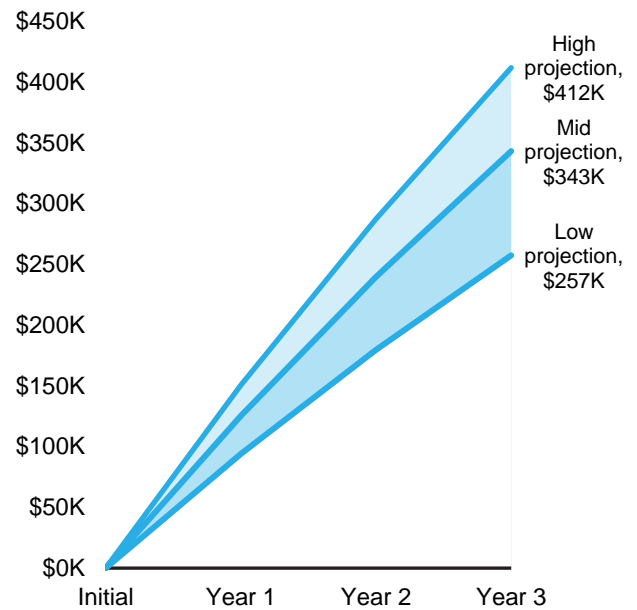
- Before Compute Ops Management, the interviewees reported that it was difficult to complete firmware and other updates within a scheduled maintenance window. The maintenance window would have to be extended, or upgrades would be delayed until the next maintenance window. This resulted in longer-than-expected server downtime.
- Survey respondents cited downtime due to server issues as their top infrastructure challenge. Forrester found that 59.7% of survey respondents called out downtime due to server issues as a key challenge.<sup>2</sup>

**Modeling and assumptions.** For the analysis, Forrester assumes the following for the composite organization:

- The composite manages 300 edge servers with Compute Ops Management.
- In the low-impact scenario, on average, the composite avoids 3.0 hours of downtime per server.
- In the mid-impact scenario, on average, the composite avoids 4.0 hours of downtime per server.
- In the high-impact scenario, on average, the composite avoids 4.8 hours of downtime per server.
- The cost of server downtime is \$115 per hour. This includes potential revenue loss and lost end-user employee productivity.

**Results.** This yields a three-year projected PV ranging from \$257,389 (low) to \$411,823 (high).

**Avoided Server Downtime: Range Of Three-Year Cumulative Impact, PV**



Avoided Server Downtime					
Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Remote servers managed with Compute Ops Management	Composite	300	300	300
C2			3.0	3.0	3.0
C2	Average downtime per remote server avoided annually with Compute Ops Management (hours, rounded)	Interviews	4.0	4.0	4.0
C2			4.8	4.8	4.8
C3	Cost per hour of remote server downtime	Industry research	\$115	\$115	\$115
<b>Ct<sub>Low</sub></b>			<b>\$103,500</b>	<b>\$103,500</b>	<b>\$103,500</b>
<b>Ct<sub>Mid</sub></b>	<b>Avoided server downtime</b>	<b>C1*C2*C3</b>	<b>\$138,000</b>	<b>\$138,000</b>	<b>\$138,000</b>
<b>Ct<sub>High</sub></b>			<b>\$165,600</b>	<b>\$167,600</b>	<b>\$165,600</b>
<b>Three-year projected total: \$310,500 to \$496,800</b>		<b>Three-year projected present value: \$257,389 to \$411,823</b>			

### DECOMMISSIONING OTHER SERVER MANAGEMENT TOOLS

**Evidence and data.** The interviewees were typically able to decommission other server management tools after deploying Compute Ops Management — for example, patching and firmware update tools.

**Modeling and assumptions.** For the analysis, Forrester assumes the following for the composite organization:

- In the low-impact scenario, the composite organization does not decommission any server management tools and retains the full cost of the existing server management tools.

- In the mid-impact scenario, the composite organization partially decommissions its prior server management tools. Decommissioning begins in Year 1 and is fully complete by Year 2.
- In the high-impact scenario, the composite organization decommissions all its prior server management tools. Decommissioning begins in Year 1 and is fully complete by Year 2.

**Results.** This yields a three-year projected PV ranging from \$0 (low) to \$101,615 (high).

Decommissioning Other Server Management Tools					
Ref.	Metric	Source	Year 1	Year 2	Year 3
D1	Spending on other server management tools	Composite	\$50,000	\$50,000	\$50,000
D2			0%	0%	0%
D2	Decommissioning of other server management tools	Interviews	25%	50%	50%
D2			50%	100%	100%
<b>Dt<sub>Low</sub></b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Dt<sub>Mid</sub></b>	<b>Decommissioning other server management tools</b>	<b>D1*D2</b>	<b>\$12,500</b>	<b>\$25,000</b>	<b>\$25,000</b>
<b>Dt<sub>High</sub></b>			<b>\$25,000</b>	<b>\$50,000</b>	<b>\$50,000</b>
<b>Three-year projected total: \$0 to \$125,000</b>			<b>Three-year projected present value: \$0 to \$101,615</b>		

## UNQUANTIFIED BENEFITS

Interviewees mentioned the following additional benefits that their organizations experienced but were not quantified in Forrester’s analysis:

- **Enhanced security posture.** Compute Ops Management improved overall security with faster patching and a secure server management portal. Before Compute Ops Management, it could take weeks to roll out a security patch. Subsequently, patching was continuous, eliminating security vulnerabilities. Compute Ops Management provided a secure portal to manage and monitor servers.
  - The systems engineer, financial services, noted that before Compute Ops Management: “We needed to decrease the amount of time we were spending patching because security is a top priority. When it takes weeks to roll out a patch, that’s a major problem.”
  - The director of infrastructure and end-user computing, hospitality, added, “Our security team wants to know we’re in a good spot when it comes to firmware updates.”
  - The CTO, professional services, shared: “[With Compute Ops Management] to monitor the platform, I don’t need a remote connection to get access to the

platform. It’s more secure since there is no access to the data itself when I am monitoring and managing the servers.”

- **Consolidated overview of server performance.** Compute Ops Management provides dashboards with an overview of server performance and compliance.
  - The systems engineer, professional services, shared, “[Before Compute Ops management], the IT team would have to log into three different systems for server management.”
  - He added: “We are all about dashboards these days. I can see at a high level all my servers. You can see what’s up, where we have issues, and that’s great. We are able to pull information for our metrics call to see trends and plan for the future.”
  - The team leader, IT data center, construction, stated: “One of the advantages [of Compute Ops Management] is that you have a great overview. You can see the status of every server and when a server is not compliant. We don’t have to check every server separately.”
- **Improved onboarding for new IT employees.** The interviewees found that it was easier and faster to onboard IT employees managing servers with Compute Ops Management.
  - The systems engineer, financial services, said: “New people that we are onboarding can pick [Compute Ops Management] up right away. There is not a whole lot of training involved.”
  - The CTO, professional services, added, “[With Compute Ops Management], we

**“If there is a zero-day issue that comes out, being able to go out and update firmware fixes in a timely fashion is huge for us.”**

*Systems engineer, professional services*

spend less time onboarding people on firmware management tasks.”

- **Improved IT employee morale.** With Compute Ops Management, the IT team spent less time on evenings and weekends updating and managing servers. The team had the tools to do their job efficiently and could use the time saved for higher-value activities.
  - The systems engineer, financial services, stated, “With no failures, [the server management team] are not spending their whole overnight shift patching.”
  - The CTO, professional services, shared, “Employees are confident that they can do what needs to be done [with Compute Ops Management].”

## FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Compute Ops Management and later realize additional uses and business opportunities, including:

- **Scalability.** Compute Ops Management can support anywhere from one to thousands of remote servers. This provides flexibility for growing companies as they expand their remote server base.
- **On-premises server management.** While this study focuses on remote server management, Compute Ops Management also supports management of compute devices located in on-premises data centers.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in [Appendix A](#)).

**“[With HPE Compute Ops Management], firmware updates are a lot better. Our server team knows they’re going to have more time to spend with their families on the weekends.”**

*Systems engineer, professional services*

# Analysis Of Costs

■ Quantified cost data as applied to the composite

Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Etr	Compute Ops Management subscription cost	\$0	\$45,000	\$45,000	\$45,000	\$135,000	\$117,504
Ftr	Implementation and maintenance cost	\$27,600	\$13,800	\$13,800	\$13,800	\$69,000	\$61,919
Gtr	Training cost	\$442	\$110	\$110	\$110	\$773	\$716
Total costs (risk-adjusted)		\$28,042	\$61,160	\$61,160	\$61,160	\$211,523	\$180,139

## COMPUTE OPS MANAGMENT SUBSCRIPTION COST

**Evidence and data.** The interviewees pay HPE a subscription for Compute Ops Management. The subscription usually has a three- or five-year term.

**Modeling and assumptions.** For the analysis, Forrester assumes the following for the composite organization:

- The Compute Ops Management subscription list price is \$150 per server annually. The composite organization uses Compute Ops Management to manage 300 servers.
- Pricing may vary. Contact HPE for additional details.

**Risks.** The cost of the Compute Ops Management subscription will vary based on:

- The number of edge servers managed with Compute Ops Management.
- Any discounts or bundled offerings provided by HPE.

**Results.** To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$118,000.

Compute Ops Management Subscription Cost							
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3	
E1	Compute Ops Management subscription cost	Interviews		\$45,000	\$45,000	\$45,000	
Et	Compute Ops Management subscription cost	E1	\$0	\$45,000	\$45,000	\$45,000	
	Risk adjustment	↑5%					
Etr	Compute Ops Management subscription cost (risk-adjusted)		\$0	\$47,250	\$47,250	\$47,250	\$47,250
<b>Three-year total: \$141,750</b>				<b>Three-year present value: \$117,504</b>			

**IMPLEMENTATION AND MAINTENANCE COST**

**Evidence and data.** The interviewees found that Compute Ops Management was easy to implement, and as it is a SaaS solution, HPE was responsible for ongoing system management.

- The systems engineer, financial services, noted: “The implementation was easy with HPE. We don’t have to manage the system. That is all managed by HPE in their cloud environment.”

**Modeling and assumptions.** For the analysis, Forrester assumes the following for the composite organization:

- The composite organization’s IT team spends three months planning and testing Compute Ops Management. During the implementation phase, two IT team members each spend 10 hours per week for 12 weeks planning for and testing Compute Ops Management. They coordinate with the composite’s engineering team and developers. During the final week of implementation, the two IT team members work full-time on the implementation.

- Once Compute Ops Management is deployed, the internal IT team spends only a modest amount of time maintaining the system since HPE is responsible for ongoing system management.
- The average annual salary, including benefits, for an implementation team member is \$120,000. The team managing the installation consists of experienced senior systems engineers.

**Risks.** This cost will vary based on:

- The skill set of the internal IT team.
- The complexity of the implementation.
- The number of edge servers managed with Compute Ops Management.

**Results.** To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of \$62,000.

Implementation And Maintenance Cost						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
F1	FTEs to implement and maintain Compute Ops Management	Interviews	0.20	0.10	0.10	0.10
F2	Annual salary, including benefits	Interviews	\$120,000	\$120,000	\$120,000	\$120,000
Ft	Implementation and maintenance cost	F1*F2	\$24,000	\$12,000	\$12,000	\$12,000
	Risk adjustment	↑15%				
Ftr	Implementation and maintenance cost (risk-adjusted)		\$27,600	\$13,800	\$13,800	\$13,800
<b>Three-year total: \$69,000</b>			<b>Three-year present value: \$61,919</b>			

**TRAINING COST**

**Evidence and data.** The interviewees shared that only modest training was required for their IT teams to get up to speed on Compute Ops Management.

**Modeling and assumptions.** For the analysis, Forrester assumes the following for the composite organization:

- The IT team members initially each spend 4 hours training on the Compute Ops Management system. They subsequently spend 1 hour per year training to learn new features and functionality.
- The IT team includes both system administrators and systems engineers. The average fully burdened salary for the IT team members is \$48 per hour (\$100,000 annually).

**Risks.** This cost will vary based on:

- Number of IT team members trained on Compute Ops Management, including new IT team

members joining after the platform is implemented.

- Pre-existing knowledge and skill set of IT team members.

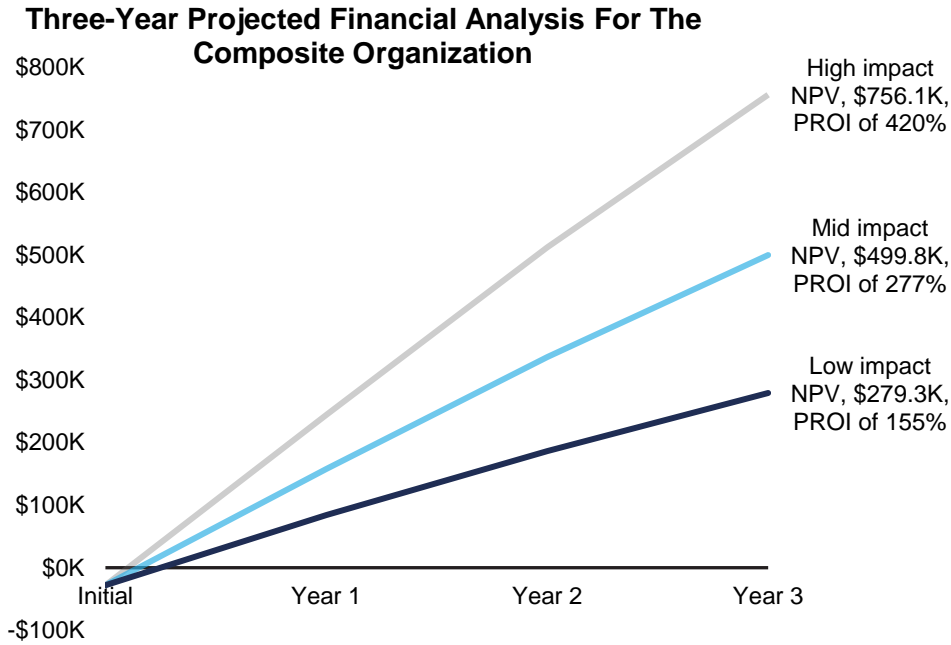
**Results.** To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of \$717.

**“There is not a whole lot of training involved [with Compute Ops Management].”**  
*Systems engineer, financial services*

Compute Ops Management Training Cost						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
G1	FTEs trained on Compute Ops Management	Interviews	2	2	2	2
G2	Training time (hours)	Interviews	4	1	1	1
G3	Salary per hour, including benefits, rounded	A4/2,080	\$48	\$48	\$48	\$48
Gt	Training cost	G1*G2*G3	\$385	\$96	\$96	\$96
	Risk adjustment	↑15%				
Gtr	Training cost (risk-adjusted)		\$442	\$110	\$110	\$110
<b>Three-year total: \$773</b>			<b>Three-year present value: \$716</b>			

# Financial Summary

## CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS



The financial results calculated in the Benefits and Costs sections can be used to determine the PROI and projected NPV for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

**These risk-adjusted PROI and projected NPV values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.**

Cash Flow Analysis (Risk-Adjusted Estimates)						
	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$28,042)	(\$61,160)	(\$61,160)	(\$61,160)	(\$211,523)	(\$180,139)
Total benefits (low)	\$0	\$184,750	\$184,750	\$184,750	\$554,250	\$459,446
Total benefits (mid)	\$0	\$265,500	\$278,000	\$278,000	\$821,500	\$679,982
Total benefits (high)	\$0	\$360,600	\$385,600	\$385,600	\$1,131,800	\$936,203
Net benefits (low)	(\$28,042)	\$123,590	\$123,590	\$123,590	\$342,727	\$279,307
Net benefits (mid)	(\$28,042)	\$204,340	\$216,840	\$216,840	\$609,977	\$499,843
Net benefits (high)	(\$28,042)	\$299,440	\$324,440	\$324,440	\$920,277	\$756,064
PROI (low)						155%
PROI (mid)						277%
PROI (high)						420%

# Appendix A: New Technology: Projected Total Economic Impact

New Technology: Projected Total Economic Impact (New Tech TEI) is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value of their products and services to clients. The New Tech TEI methodology helps companies demonstrate and justify the projected tangible value of IT initiatives to senior management and key business stakeholders.

## TOTAL ECONOMIC IMPACT APPROACH

**Projected Benefits** represent the projected value to be delivered to the business by the product. The New Tech TEI methodology places equal weight on the measure of projected benefits and the measure of projected costs, allowing for a full examination of the effect of the technology on the entire organization.

**Projected Costs** consider all expenses necessary to deliver the proposed value of the product. The projected cost category within New Tech TEI captures incremental ongoing costs over the existing environment that are associated with the solution.

**Flexibility** represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

**Risks** measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.



## PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.



## PROJECTED NET PRESENT VALUE (PNPV)

The projected present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



## PROJECTED RETURN ON INVESTMENT (PROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.

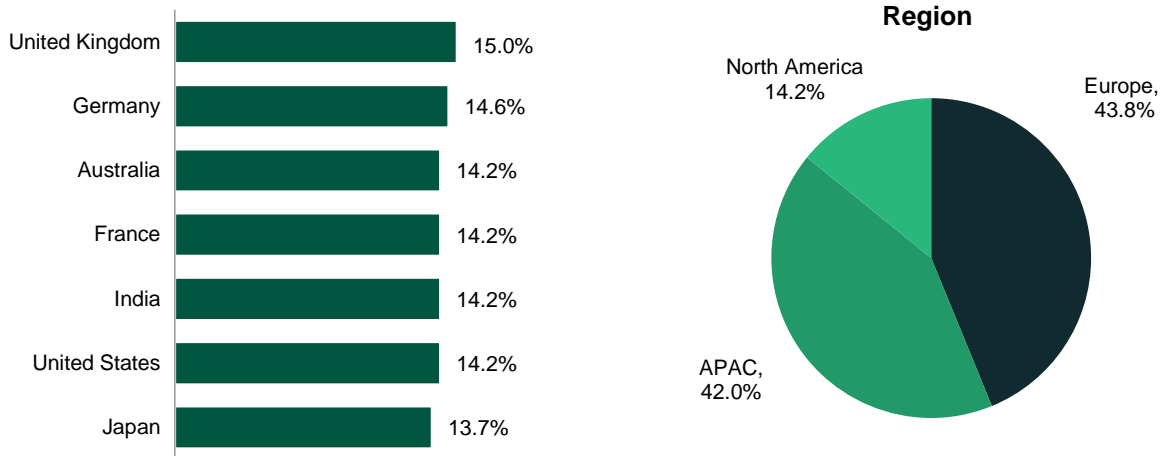


## DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.

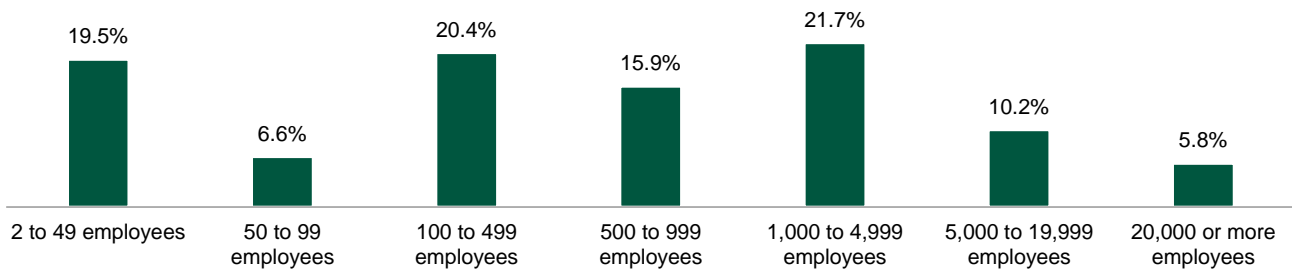
## Appendix B: Survey Demographics

“In which country are you located?”



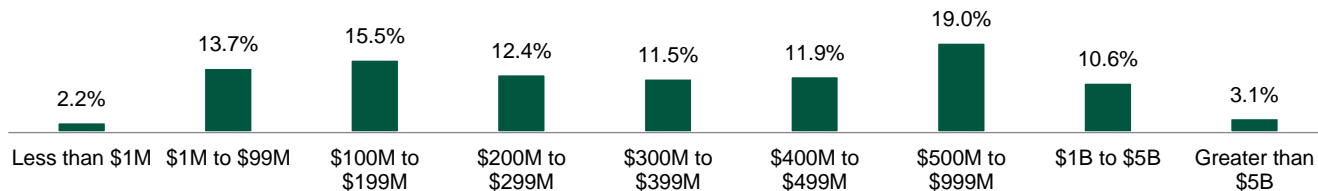
Base: 226 IT and system administration decision-makers responsible for server management  
 Note: Respondents were evenly distributed across Europe (43.8%) and APAC (42.0%); 14.2% respondents were from North America  
 Source: A commissioned study by Forrester Consulting on behalf of HPE, April 2024

“Using your best estimate, how many employees work for your firm/organization worldwide?”



Base: 226 IT and system administration decision-makers responsible for server management  
 Note: More than half (62.4%) of respondent organizations had fewer than 1,000 employees; 37.6% of respondent organizations had 1,000 or more employees  
 Source: A commissioned study by Forrester Consulting on behalf of HPE, April 2024

## “Using your best estimate, what is your organization's annual revenue (USD)?”

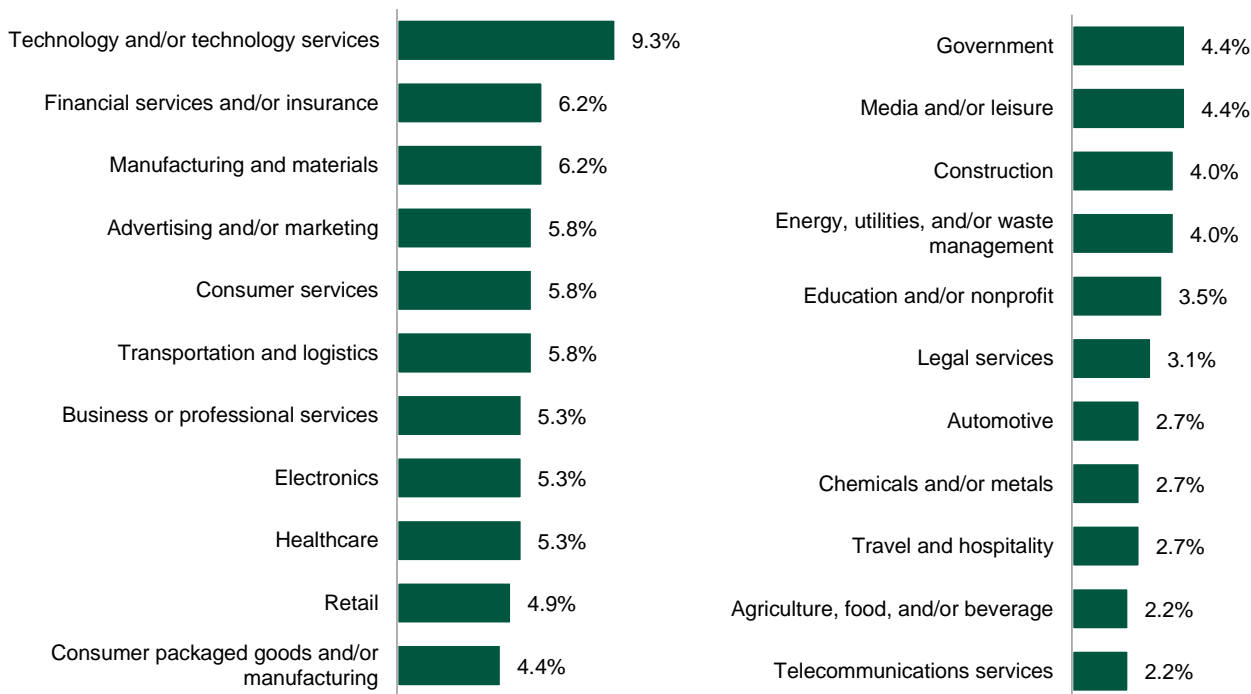


Base: 226 IT and system administration decision-makers responsible for server management.

Note: more than half (56.1%) of respondent organizations were \$300 million or more in annual revenue; 43.9% were less than \$300 million in annual revenue

Source: A commissioned study by Forrester Consulting on behalf of HPE, April 2024.

## “Which of the following best describes the industry to which your company belongs?”



Base: 226 IT and system administration decision-makers responsible for server management

Note: Top industries from respondents included technology and/or technology services (9.3%), financial services and/or insurance (6.2%), and manufacturing and materials (6.2%)

Source: A commissioned study by Forrester Consulting on behalf of HPE, April 2024

## Appendix C: Supplemental Material

*Related Forrester Research*

[The New Economics Of On-Premises Infrastructure](#), Forrester Research, Inc., June 1, 2023

[Hardware Remains Critical In A Cloud-First World](#), Forrester Research, Inc., July 17, 2023

## Appendix D: Endnotes

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<sup>1</sup> Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

<sup>2</sup> Base: 226 IT and system administration decision-makers responsible for server management. Source: A commissioned study by Forrester Consulting on behalf of HPE, April 2024.



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