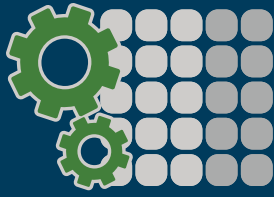


A Forrester Consulting
Thought Leadership Spotlight
Commissioned By Dell Technologies
May 2019

Faster Server Refresh Cycles Boost Innovation And Security For Midmarket Businesses

Midmarket Results From The Thought
Leadership Paper, “Why Faster Refresh Cycles
And Modern Infrastructure Are Critical To
Business Success”

Executive Summary



Midmarket businesses refresh server hardware every 3.9 years, on average, resulting in a high proportion of current infrastructure (41%) that is more than three years old.



Modern servers deliver security, efficiency, and user experience benefits. Firms with modernized IT reap these benefits at greater rates.

As midmarket companies pursue business growth, they must deliver differentiated products and experiences without compromising business or customer data. Crucial to this is having the most up-to-date IT infrastructure to support the scale and complexity of a changing application landscape. Midmarket businesses (MBs) must modernize their data centers refreshing server infrastructure and automating their IT management processes. Those that do will propel business innovation and deliver superior customer experiences with secure, fast, and reliable business technology.

In December 2018, Dell Technologies commissioned Forrester Consulting to evaluate the business value of refreshing servers and infrastructure in enterprise IT departments. Forrester conducted an online survey with 508 IT infrastructure technology decision makers (DMs) at companies with 100 or more employees in seven countries to explore this topic. This spotlight focuses on the 102 respondents we surveyed at midmarket companies with 100 to 499 employees. We found that although midmarket firms rate product improvements, better CX improvements, and increased security among their top priorities, they compromise these goals by retaining aging servers in their data centers. On the flip side, investing in modern servers yields many business and technical benefits, especially for organizations that have embraced modernized IT as a core competency.

KEY FINDINGS

- › **Midmarket businesses are investing in building better and more secure products and customer experiences.** To boost profitability, infrastructure technology DMs are focused on improving their products and customer experiences. Companies need agile technology to support these goals, which requires upgrading legacy systems. Security, cloud, analytics, and digital are among the top technology investment priorities for these firms.
- › **Aging servers compromise risk and business needs.** On average, 41% of midmarket businesses' server hardware is more than three years old, and the average server refresh cycle is 3.9 years. This is longer than ideal because modern servers are better equipped to help companies keep pace with technology innovation and combat risk concerns. Retaining aging servers can lead to time-consuming application updates and applications that do not meet the performance needs of end users.
- › **Modern servers deliver benefits that help midmarket businesses achieve their priorities.** More than a third of MBs (36% to 46%) report greater systems reliability, faster updates, and improved application performance as benefits of deploying modern servers. These firms averaged 25% faster deployments, 20% faster app updates, and 20% less downtime. These benefits yield greater IT efficiency, improved employee productivity, improved CX, and increased security. Companies that embrace modernized infrastructure management practices are driving even greater benefits from their server investments in delivering applications that are up to 3x more likely to meet end user needs.

Aging Infrastructure Hinders Progress Toward Key Business Priorities

Although MBs are generally smaller and more agile than large, global enterprises, these organizations view their technology investments through an enterprise-like lens. They have shifted the focus of IT investments from internal operations to customer experience-related initiatives.¹

For infrastructure and operations (I&O) professionals, success toward these priorities means delivering fast, reliable software and hardware that supports positive end user experiences without compromising the security of business or customer data. Forrester Analytics Global Business Technographics© surveys reveal some of the motivators behind midmarket businesses' technology investments (see Figure 1):

- › **Midmarket businesses are working to improve revenue and customer experiences with IT innovation.** IT organizations are well-positioned to support company profitability from both the revenue growth and the cost reduction sides of the spectrum. Product, service, and CX improvements help drive revenue while smart infrastructure investments and efficiency-improving initiatives help to reduce costs. Achieving this balance requires IT organizations to embrace innovation with every step. It therefore comes as no surprise that these initiatives are among infrastructure decision makers' top business priorities.
- › **Data, analytics, and cloud computing can help I&O teams achieve these goals.** IT decision makers count improving their use of data and analytics, as well as increasing their use of cloud computing, among their top technology priorities. MBs are also investing in digital experience technologies and upgrading legacy systems to support innovation — a third of respondents said these are high-priority investments. In the end, a combination of modernizing technology infrastructure as well as taking a cognitive approach to operations yields the best results.
- › **Security and privacy imperatives underpin all of these initiatives.** A company's most valuable resource is its data, and there is no shortage of attackers employing increasingly sophisticated methods to access companies' intellectual property (IP) or customers' personally identifiable information (PII).² To combat these threats, infrastructure decision makers at midmarket companies rate improving their security and privacy capabilities as their top technology priority. Navigating security concerns is a top challenge when implementing multiple cloud environments. In a hybrid world, I&O teams at MBs must leverage holistic automation and reform their governance practices to address these concerns.

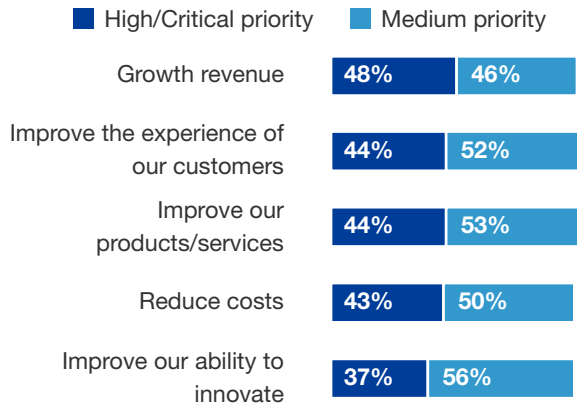


Security concerns are the top challenge midmarket businesses face when implementing multiple cloud environments.

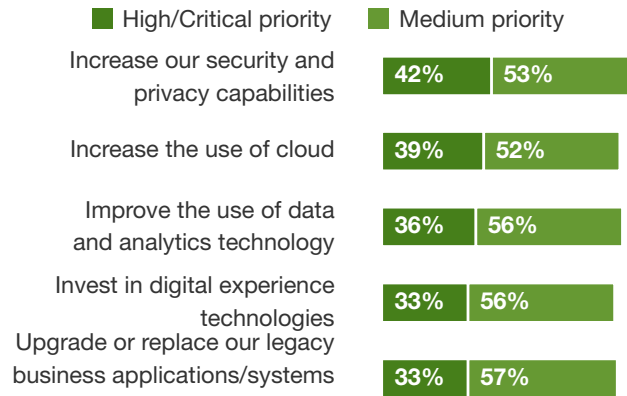
Figure 1

Midmarket businesses prioritize technology investments that help them boost profitability and innovation without compromising security

Key business priorities for infrastructure decision makers at medium businesses:



Key technology priorities for IT decision makers at medium businesses*:



Base: 663 infrastructure decision makers at MBs; *907 purchase influencers (past 12 months/next 12 months) at MBs
 Sources: Forrester Analytics Global Business Technographics Infrastructure Survey, 2018; *Forrester Analytics Global Business Technographics Priorities And Journey Survey, 2018

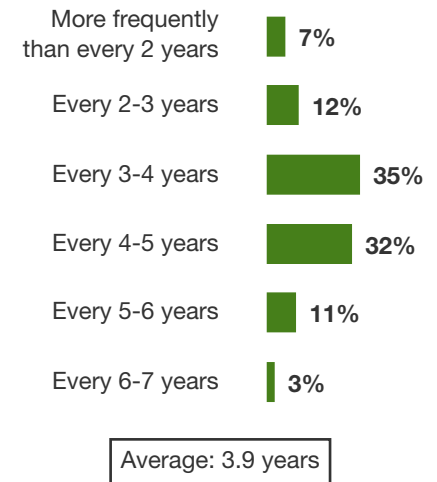
Despite these priorities, 40% of midmarket businesses are retaining one or more servers in their data centers that are at least 6 years old. Companies that retain aging servers compromise workload and application performance, as well as put their data at risk, because older servers were not designed with today’s security challenges in mind. Our survey of 102 infrastructure technology DMs at midmarket businesses showed that:

› **Midmarket businesses retain server hardware for longer than they should.** On average, 41% of the servers in a midmarket firm’s data center are more than 3 years old, and 15% are 5 years old or older. Firms are adding capacity to support emerging workloads, but they retain aging hardware for 3.9 years on average (see Figure 2). Waiting more than three years to replace server hardware puts I&O teams at a significant disadvantage. Modern servers have built-in features that support higher volumes of virtualization and containerization, faster deployment, streamlined management features, and greater ability to tie application deliverables to hardware with APIs built for infrastructure-as-code. In adopting these continuous delivery constructs, risk management is improved because critical security flaws can be fixed faster. Companies that refresh their servers every three years or less will reap these benefits of modern servers at greater rates than those with slower refresh cycles.

Figure 2

Midmarket Businesses Refresh Servers Every 3.9 Years

Frequency of server refresh cycles:

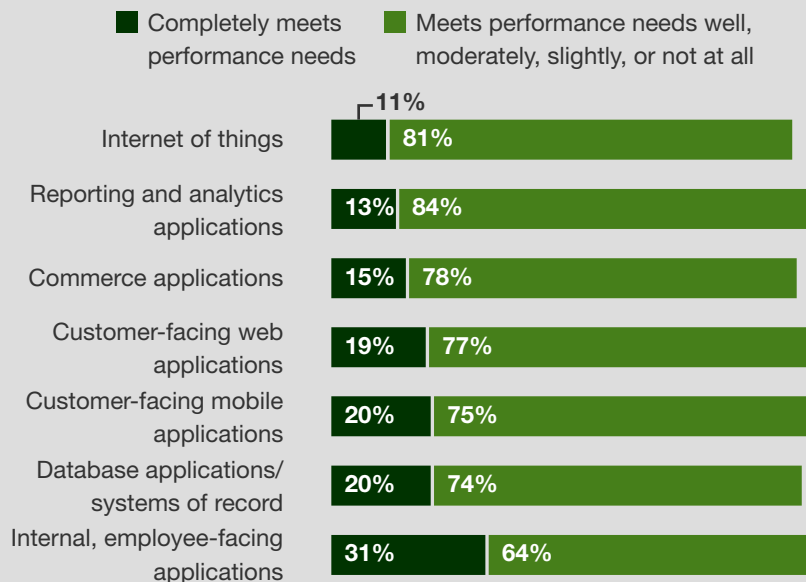


Base: 102 global IT infrastructure technology decision makers at MBs
 Source: A commissioned study conducted by Forrester Consulting on behalf of Dell Technologies, December 2018

- › **They have also made little progress toward automating server processes.** Modern companies need automated infrastructure processes to cut through the inevitable complexity of the data-rich, distributed, multicloud environments they have built to enable greater scalability and flexibility. Companies also need to keep up with attackers who are equipped with an array of automated tools designed to break through the network perimeter.³ However, only 12% of MBs have made “excellent” progress toward automating infrastructure provisioning, configuration, and change management — compared to 22% of larger firms.
- › **As a result, midmarket firms struggle with time-consuming application updates and apps that do not meet end user needs.** Aging servers and manual processes are taking their toll on both IT productivity and the end users’ experience. On average, it takes half of MBs surveyed (51%) days, weeks, or even months, to deploy new versions of apps into their data centers. On-premises applications also fail to meet the performance needs of end users: less than a third of firms feel applications completely meet end users’ performance needs (see Figure 3).

Figure 3

“For the applications that run on-premises in your organization’s data centers, to what extent does application performance meet the needs of end users?”



Base: 102 global IT infrastructure technology decision makers at MBs
 Source: A commissioned study conducted by Forrester Consulting on behalf of Dell Technologies, December 2018



Older servers impede UX: Less than a third of on-premises apps completely meet end user needs.

Modern Servers Support Secure, Fast, Reliable Apps That Drive Business Innovation

Over the past few years, server manufacturers have introduced many enhancements including security in server design, improved management features, and capabilities that support increased automation. Companies can reap significant benefits from deploying these modern servers, yielding security, CX, and innovation benefits that align with their business goals. Our survey revealed that:

- › **Modern servers help companies deploy apps faster while improving systems reliability and app performance.** Nearly half of respondents (46%) credit their implementation of modern servers (those less than 3 years old) with driving higher systems reliability, and 38% have seen improved application performance. Modern servers also boast improved management features, which have helped 40% of IT leaders speed application updates and 36% deploy services faster (see Figure 4). Those that have reported these benefits report significant gains, including an average 25% less time spent on deployments, an average 20% less time spent on app updates, and an average 20% reduction in outages/downtime. With greater reliability, faster application performance, and more frequent service deployment, IT organizations with modern servers more capably deliver on business needs.
- › **Server upgrades also drive business benefits like IT efficiency, employee productivity, increased security, and better CX.** More than 30% of IT leaders at MBs report that deploying modern servers yielded more efficient staffing, more predictable budgeting, and less time spent on manual tasks. Faster, more reliable applications also improved end-user experiences, with 35% of respondents citing improved customer experiences and improved employee productivity. Furthermore, 32% of infrastructure technology DMs report that modern servers have helped them achieve the daunting, but critical, task of improving data center security (see Figure 4).
- › **A holistic approach to IT modernization is necessary in capturing the most benefits from server investments.** Our survey included a maturity framework to assess the extent to which companies embrace modernized IT as a core competency, as defined by progress toward a series of infrastructure and automation attributes.⁵ Only a small portion of companies in our survey (13%) qualified as completely “Modernized,” and even fewer within the midmarket business segment (7%) achieved this distinction. Modernized firms are investing in more computing power to support emerging technologies, and their investments help them deliver on-premises apps that are up to 3x more likely to meet end user needs than Aging firms. Faster application updates and improved infrastructure scalability are among the top technical advantages cited, with Modernized firms more than twice as likely to cite these benefits. Modernized firms also reap more business benefits from newer server investments where it matters most: data center security, employee productivity, improved CX, and increased innovation.⁵



46% of MBs report greater systems reliability as a benefit of deploying modern servers, with an average **20%** reduction in outages/downtime.

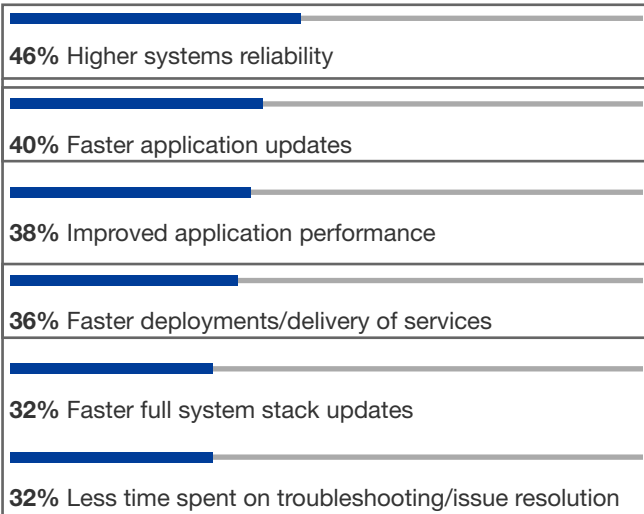


32% of infrastructure technology DMs say that modern servers have helped to increase security in their data centers.

Figure 4

“Which, if any, of the following benefits has your company realized from replacing aging servers (3 years old or older) with modern servers (less than 3 years old)?”

Technical benefits



Business benefits



Respondents who reported these benefits averaged 20% less downtime/fewer outages, 20% faster app updates, and 25% less time spent on deployments.

Base: 102 global IT infrastructure technology decision makers at MBs
Source: A commissioned study conducted by Forrester Consulting on behalf of Dell Technologies, December 2018

Key Recommendations

Delivering secure, fast, reliable software that supports business innovation and agility requires companies to embrace modernized infrastructure, from automation and virtualization tools down to the servers themselves. Forrester's in-depth survey of IT infrastructure technology decision makers about server modernization yielded several important recommendations:



Refresh your servers more frequently – ideally every three years.

Our research shows that refreshing servers is not only a capex play. In addition to technical benefits, modern hardware enables more agile IT organizations to deliver on better customer experience, employee productivity, and innovation at a faster rate than their competitors.



Invest in a holistic infrastructure modernization strategy.

Many of the organizations we surveyed are tackling infrastructure modernization with initiatives that include new deployment and automation methodologies alongside their new server approaches. Few take a comprehensive approach, but those that do reap better rewards faster.



Make modern infrastructure a cornerstone of your risk management strategy.

It may seem counterintuitive, but the more frequently you update infrastructure, the less risk you take on. Not only are modern systems easier to update, but by tying programmable infrastructure to application release life cycles, you introduce a cadence where vulnerabilities sit in production much less frequently – if at all.



Measure success of modern infrastructure with modern KPIs.

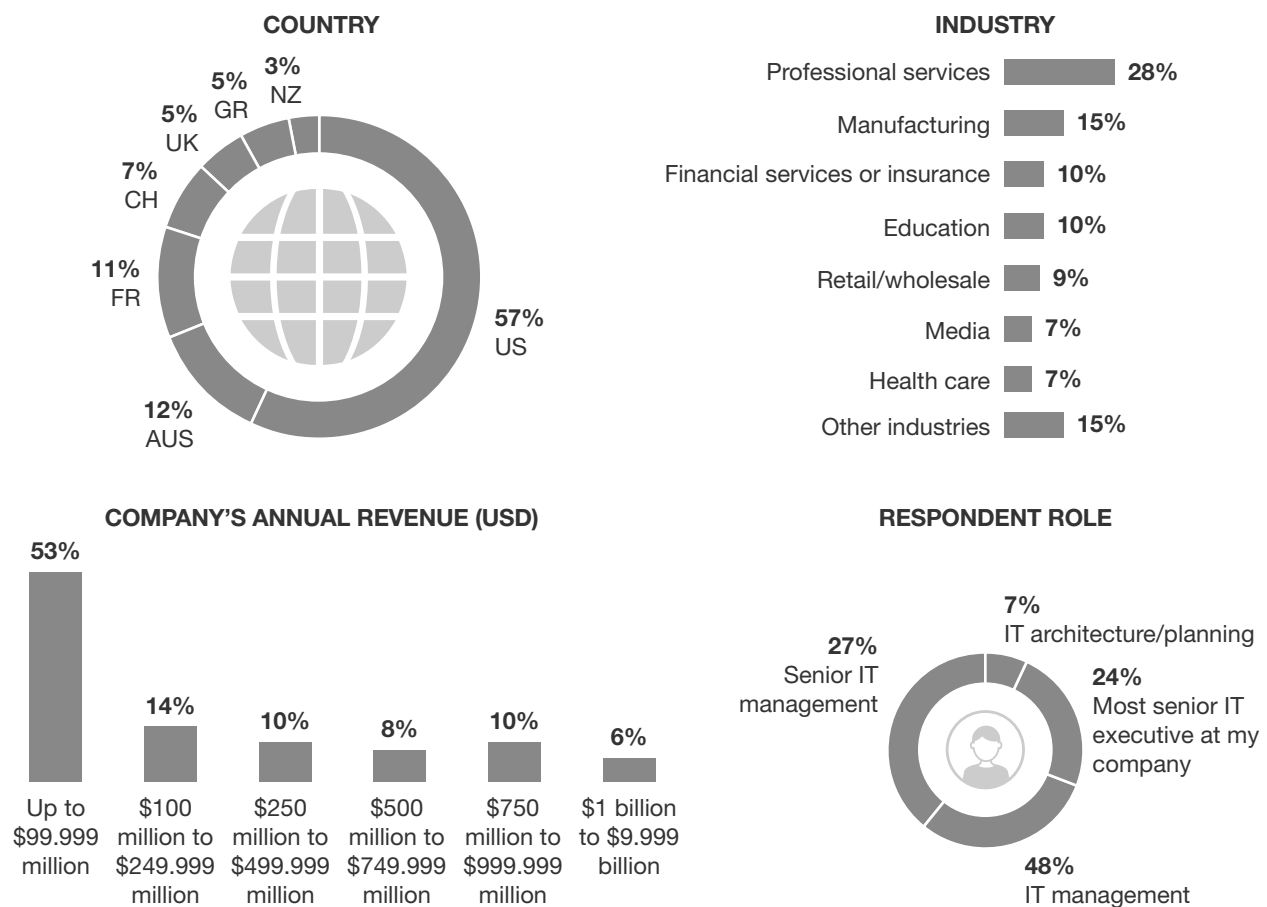
“Time-to-deploy” and “server to admin ratios” are commonly brought up as important metrics to track. However, equally important are metrics borrowed from continuous delivery: mean-time-to-approve changes, rework rate, unplanned work rate, and team attrition.⁶ Use both sets of metrics to form a strategic view of your capabilities and where you must improve.

Appendix A: Methodology

This spotlight focuses on the midmarket business results (those from companies with 100 to 499 employees) of a broader global study.

In this study, Forrester conducted an online survey of 508 organizations across industries in the US, the UK, Germany, France, Australia, New Zealand, and China to evaluate the business value of refreshing servers and infrastructure in enterprise IT departments. Survey participants included decision makers in IT management and IT architecture/planning roles with significant purchase involvement for servers and/or virtualization/private cloud. Questions provided to the participants asked about infrastructure technology adoption, management and automation practices, server refresh cycles, progress toward SDDC, and benefits of replacing aging servers with modern servers. Respondents were offered a small incentive as a thank you for time spent on the survey. The study was completed in December 2018.

Appendix B: Demographics/Data



Base: 102 global IT infrastructure technology decision makers at medium businesses
 Source: A commissioned study conducted by Forrester Consulting on behalf of Dell Technologies, December 2018

Appendix C: Supplemental Material

RELATED FORRESTER RESEARCH

“The Software-Defined Data Center Comes Of Age,” Forrester Research, Inc., October 30, 2017.

“Reform Legacy Operations For Composable Infrastructure,” Forrester Research, Inc., January 19, 2017.

“Become A Unicorn With Infrastructure-As-Code,” Forrester Research, Inc., September 19, 2018.

Appendix D: Endnotes

¹ Source: “SMBs Now View Their Tech Investments Through An Enterprise-Like Lens,” Forrester Research, Inc., April 25, 2017.

² For more insights about security and privacy trends in 2019, see “The State Of Data Security And Privacy: 2018 To 2019,” Forrester Research, Inc., December 5, 2018.

³ Source: “Reduce Risk And Improve Security Through Infrastructure Automation,” Forrester Research, Inc., June 22, 2018.

⁴ The modernized IT maturity framework is defined by adoption of and progress toward virtualization, scale-out storage, software-defined data center technologies, converged/hyperconverged infrastructure, data protection, infrastructure automation, and self-service for provisioning. For more details on this framework, read the full study, “Why Faster Refresh Cycles And Modern Infrastructure Management Are Critical To Business Success,” a commissioned study conducted by Forrester Consulting on behalf of Dell Technologies, May 2019.

⁵ For more insights about the benefits of modernization, read the full study, “Why Faster Refresh Cycles And Modern Infrastructure Management Are Critical To Business Success,” a commissioned study conducted by Forrester Consulting on behalf of Dell Technologies, May 2019.

⁶ Source: “Use Four Key Categories To Measure What Matters In Continuous Deployment,” Forrester Research, Inc., February 9, 2018.

To learn more about the project sponsor, Dell Technologies Mid-Market IT Solutions, [visit the website](#).

Project Director:

Karin Fenty,
Principal Market Impact Consultant

Contributing Research:

Forrester’s Infrastructure & Operations research group

ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester’s Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit forrester.com/consulting.

© 2019, Forrester Research, Inc. All rights reserved. Unauthorized reproduction is strictly prohibited. Information is based on best available resources. Opinions reflect judgment at the time and are subject to change. Forrester®, Technographics®, Forrester Wave, RoleView, TechRadar, and Total Economic Impact are trademarks of Forrester Research, Inc. All other trademarks are the property of their respective companies. For additional information, go to forrester.com. [E-42080]