451 Research | BLACK & WHITE PAPER

The Public Cloud Payments Imperative

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DECEMBER 2018

About this paper

A Black & White paper is a study based on primary research survey data that assesses the market dynamics of a key enterprise technology segment through the lens of the "on the ground" experience and opinions of real practitioners – what they are doing, and why they are doing it.

ABOUT THE AUTHOR

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Introduction

Payments have become an increasingly strategic area of focus for enterprises, impacting market expansion efforts, customer experience, business model evolution and, ultimately, revenue growth. As the role of payments in business strategy continues to expand, enterprises mustn't overlook the importance of the infrastructure underpinning their transaction acceptance and processing capabilities. To harness the full potential of online payments, this infrastructure must be secure and scalable, and serve as a platform for innovation, all while maintaining continuous uptime.

In an effort to gain a deeper understanding of how large enterprise-scale merchants are thinking through these online payments infrastructure requirements, 451 Research surveyed 800 merchants based in the US, UK, France, Germany, the Netherlands, Singapore, Australia and Japan, completing 100 surveys in each market in Q3 2018. We targeted businesses with 1,000+ employees in the US and 500+ employees in all other markets, with no single merchant vertical composing more than 20% of the overall sample. Respondents included a mix of business decision-makers such as CFOs, controllers, heads of payments and VPs of finance, in addition to IT decision-makers that play a role in payment technology purchase decisions. All respondents were screened up front for adequate knowledge and decision-making authority for how their business accepts and processes customer payments.

This report presents our primary takeaways from the study and focuses on the key payments infrastructure challenges enterprises are confronted with. Further, it presents guidance for merchants of any size to consider when seeking a partner that can help convert payments from a cost of doing business into a strategic advantage.

THE 451 TAKE

There's an emerging trend of sophisticated enterprise merchants making cloud-based payments infrastructure a strategic priority. Our survey revealed that businesses that view online payments as 'highly strategic' are more likely to be using the public cloud – i.e., running on a large hyperscale platform such as AWS or Azure vs. managing/hosting their own datacenters – compared to those that only see payments as 'somewhat strategic.' We see a strong correlation between the adoption of cloud-based services by sophisticated enterprise merchants and the notion that payments drive strategic competitive differentiation. Underscoring this point, nearly two-thirds of respondents using the public cloud for payments have seen improvements in security, innovation and uptime while nearly three in five cited improved scalability.

Additional Key Findings:

- Businesses that view online payments as 'highly strategic' show the strongest affinity for the public cloud, with 70% 'highly likely' to consider a public-cloud-based payments provider.
- Enterprises that view payments as a 'highly strategic' area of focus are almost 2.5 times more likely to outsource payments to a single provider as compared to those that only view payments as 'somewhat strategic.'
- Nearly three-quarters of respondents noted that downtime during peak hours preventing acceptance of customer payments would result in a loss of $1,000 or more per minute. In line with this finding, 'downtime' ranks as a top-two cause for respondents that are considering switching to a new payments provider.
- For enterprises with over $5bn in annual revenue, the top reason for considering switching payments providers is due to 'lack of use of the public cloud.'
- Respondents using public-cloud-based payments infrastructure cited 'improved security' as the number-one benefit they've realized from implementation.

A Focus on Infrastructure

The Strategic Importance of Payments Requires Enterprises to Refocus on their Underlying Infrastructure

In recent years, 451 Research has observed a positive change in merchants' attitudes toward the role of payments within their businesses. Although many merchants once dismissed payments as a 'cost center' and 'cost of doing business,' more companies are looking to payments as source of differentiation and a core component of their product experience.

Our survey results reflect that shift in sentiment, with two-thirds of respondents stating that payments are a *highly strategic area of focus that drives significant competitive differentiation* for their company. Newer enterprises are more likely to share this viewpoint, with 78% of businesses in operation for less than five years noting that payments are 'highly strategic,' compared to 55% of businesses operating for more than 25 years. This could in part be attributed to a correlation between company age and the amount of technical debt in their payments stack; more tenured companies may believe that the age of their infrastructure and sunk costs in establishing payments capabilities across markets make it prohibitive to fully harness the strategic potential of payments.

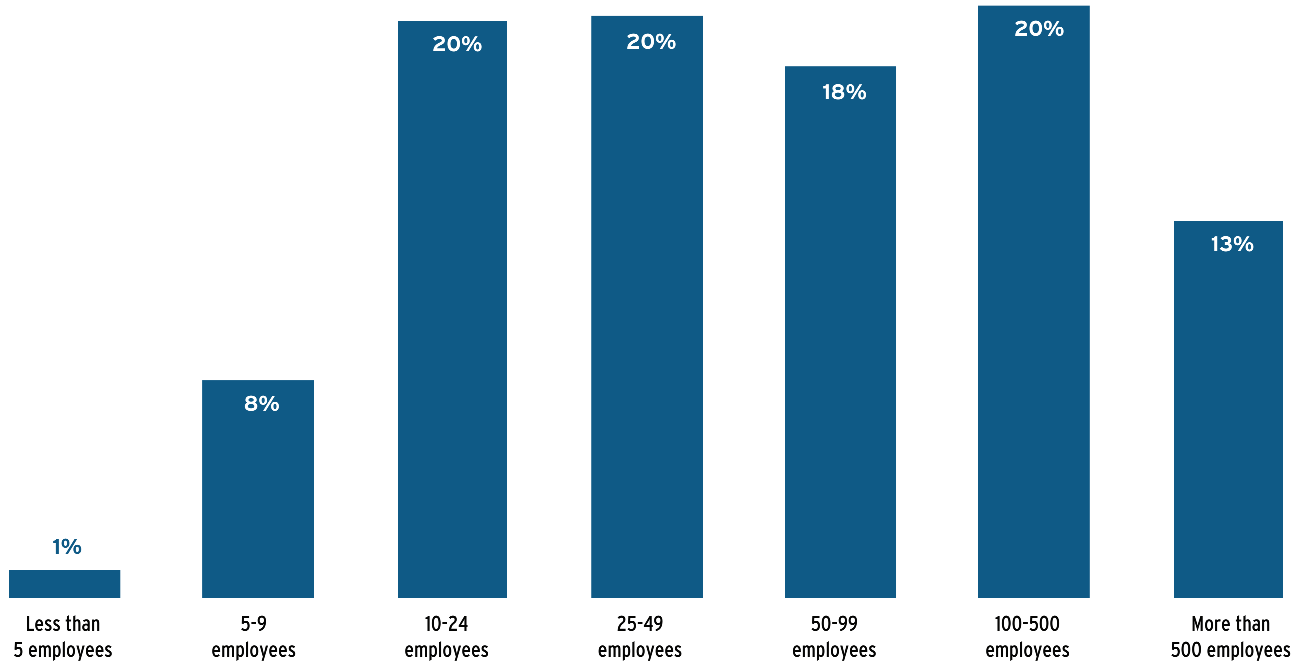
RESOURCING, OUTSOURCING AND PARTNERING

The headcount that larger merchants dedicate toward payments is not insignificant. As shown in Figure 1, one in three have more than 100 full-time employees responsible for tasks such as managing payment vendor relationships and maintaining payment infrastructure. Resourcing increases in unison with the size of the enterprise; for merchants with more than 25,000 employees, 45% have 500+ employees dedicated to payments. US-based enterprises registered the most significant staffing investment, with nearly a quarter (23%) employing 500+ in payments-related roles.

Figure 1: Significant headcount is dedicated to payments roles

Source: 451 Research

Q: Approximately how many full-time employees do you have dedicated to payments in your business (e.g., employees responsible for managing vendor relationships, maintaining payment infrastructure)?



Given the expense associated with operating large, in-house payments teams, we recommend that enterprises reassess their staffing requirements to consider how certain employees could be reallocated into roles that better support the core business. Developers, for instance, represent an enterprise's most scarce and expensive resources, and finance teams would be wise to consider how to best optimize their time.

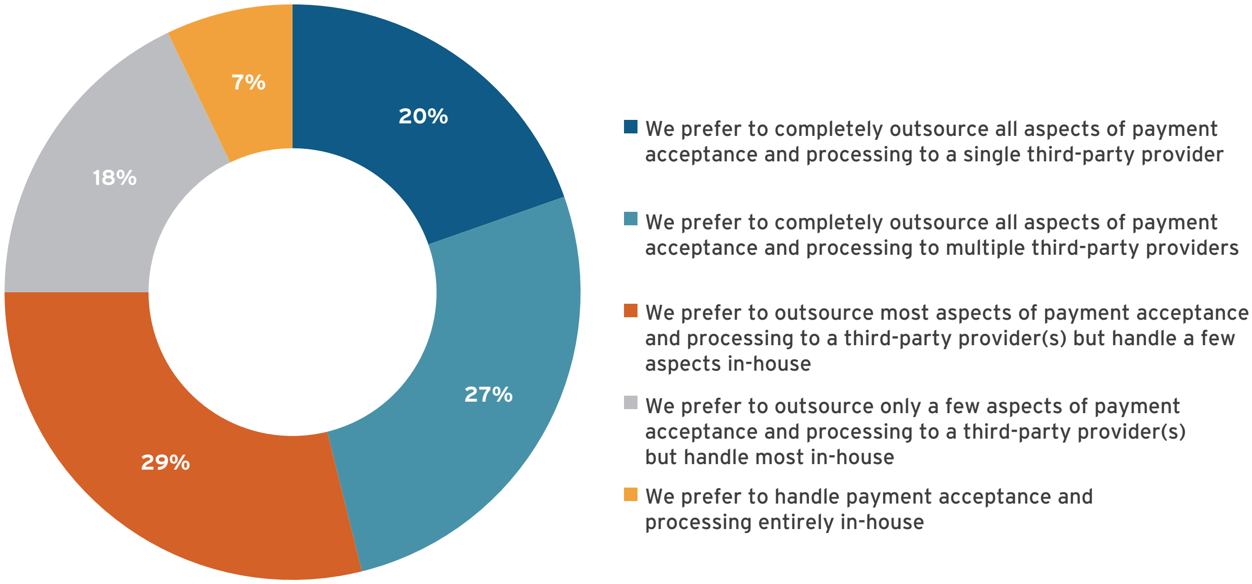
Outsourcing various payments functions is one way to reallocate internal resources. A strong payments partner can help offload some internal operational responsibilities while helping the merchant convert payments into a strategic advantage. Our survey results show that 93% of enterprise merchants said they outsource at least some components of payment acceptance and processing to a third-party provider, and nearly half (47%) outsource it all (Figure 2). The dichotomy in strategies between more established businesses and newer entrants is apparent, with 69% of merchants in operation less than five years preferring to completely outsource payments, compared to just 31% of those in business for more than 25 years; older businesses are also three times as likely as newer ones to handle payments completely in-house.

There is also an interesting correlation between a merchant's viewpoint on payments and its approach to outsourcing. Enterprises that view payments as a 'highly strategic' area of focus are almost 2.5 times more likely to outsource payments to a *single* provider as compared to those that only view payments as 'somewhat strategic.' While the benefits of working with a single partner are clear (cost optimization, unified reporting, improved fraud visibility, single point of contact, etc.), we've observed that enterprises that opt to work with multiple providers often due so out of necessity as opposed to preference. For instance, we often find that enterprises have pursued an additional partner because their primary processor was unable to support payment acceptance in a new market. Others have engaged multiple partners to ensure failover support because they faced reliability issues with legacy gateway providers. These factors, among many others, result in complex payment ecosystems that create reconciliation and reporting challenges, not to mention increase internal staffing requirements for vendor management and integration.

Figure 2: Outsourcing of payment acceptance and processing

Source: 451 Research

Q: Thinking about your company's approach to payments, which of the following is accurate?



Enterprise Payments Challenges

As shown in Figure 3, enterprises face a wide variety of payments challenges. Topping the list is improving security and PCI compliance, cited by nearly two in five respondents, followed closely by integrating new, non-credit-card-based or alternative payment methods. As the number of payment methods has increased, merchants have been challenged to effectively prioritize which options they should support in each market, as well as to dynamically surface the most relevant payment method based on factors such as the customer's location, device type, fraud scoring, etc.

Decreasing fraud and chargebacks is the third biggest challenge, cited by 30% of respondents. Our research shows this concern is highest among small enterprises generating less than $25m in annual revenue. These companies may believe that more robust anti-fraud tools are either too costly or resource-intensive and, therefore, out of reach. Increasing uptime and reliability rounds out the top four most widely cited challenges, selected by 28% of respondents.

Figure 4 underscores the criticality of uptime and the business impact of downtime. Three-quarters of respondents noted that downtime during peak hours preventing acceptance of customer payments would result in a loss of $1,000 or more per minute. For businesses with more than $5bn in annual revenue, 25% said they would lose more than $20,000 per minute. To put that into perspective, each hour of downtime costs these businesses more than $1m in missed revenue.

Figure 3: Top enterprise payments challenges

Source: 451 Research

Q: What are the biggest challenges facing your organization this year when it comes to payments? (Select up to three.)

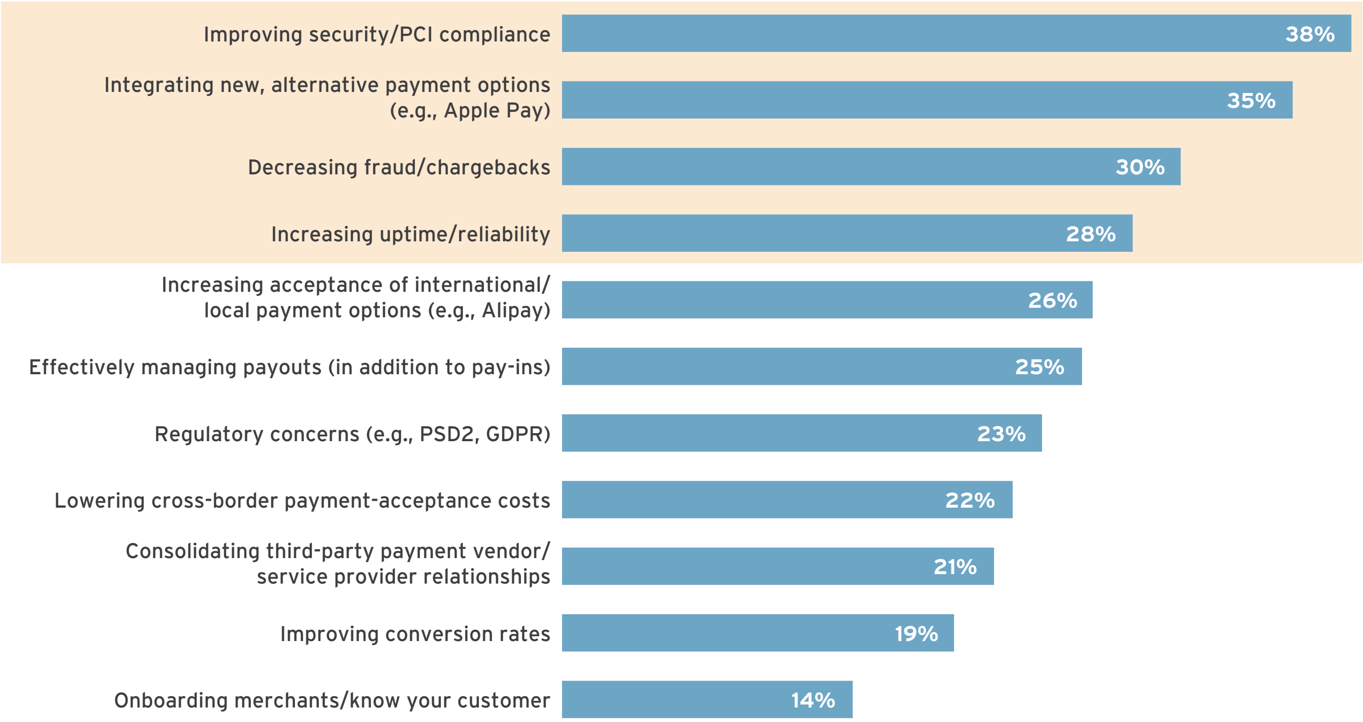
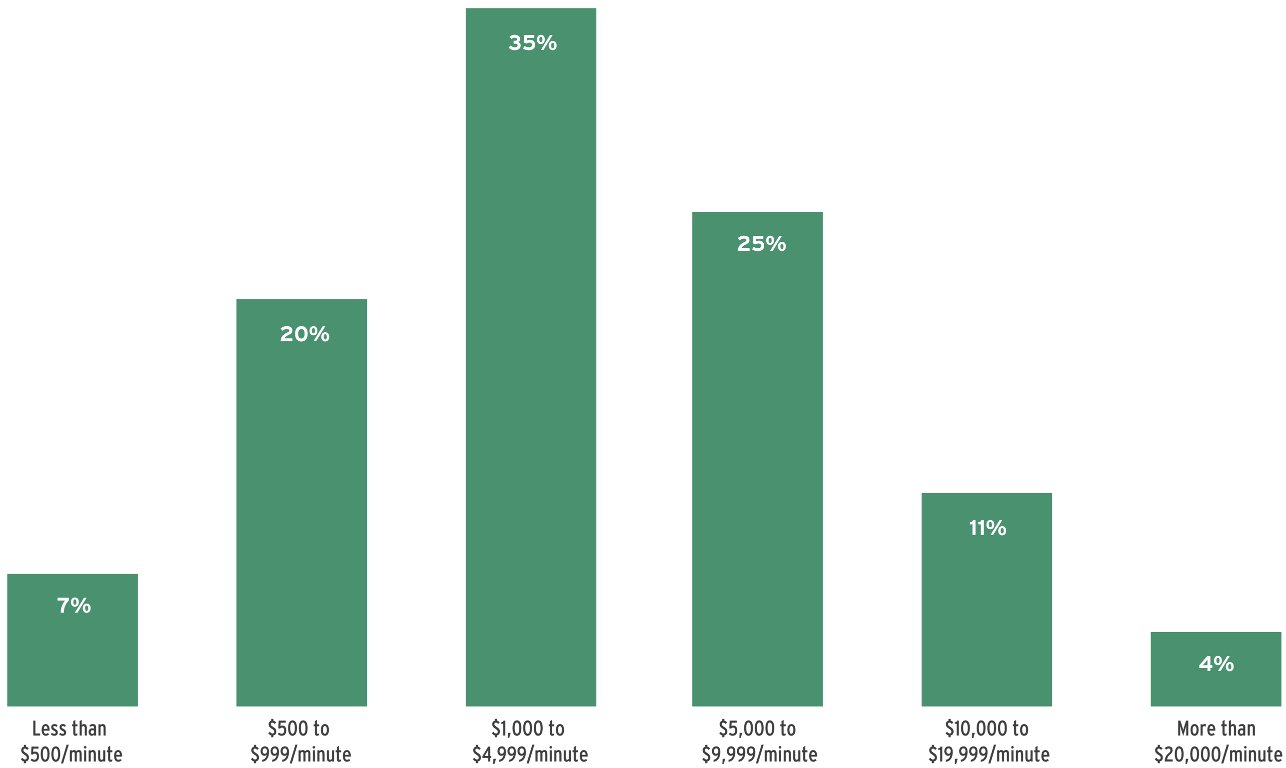


Figure 4: Impact of payments downtime on the bottom line

Source: 451 Research

Q: Imagine that your organization suffered an outage preventing it from accepting payments from customers during peak business hours. How much revenue do you estimate would be lost per minute of downtime?

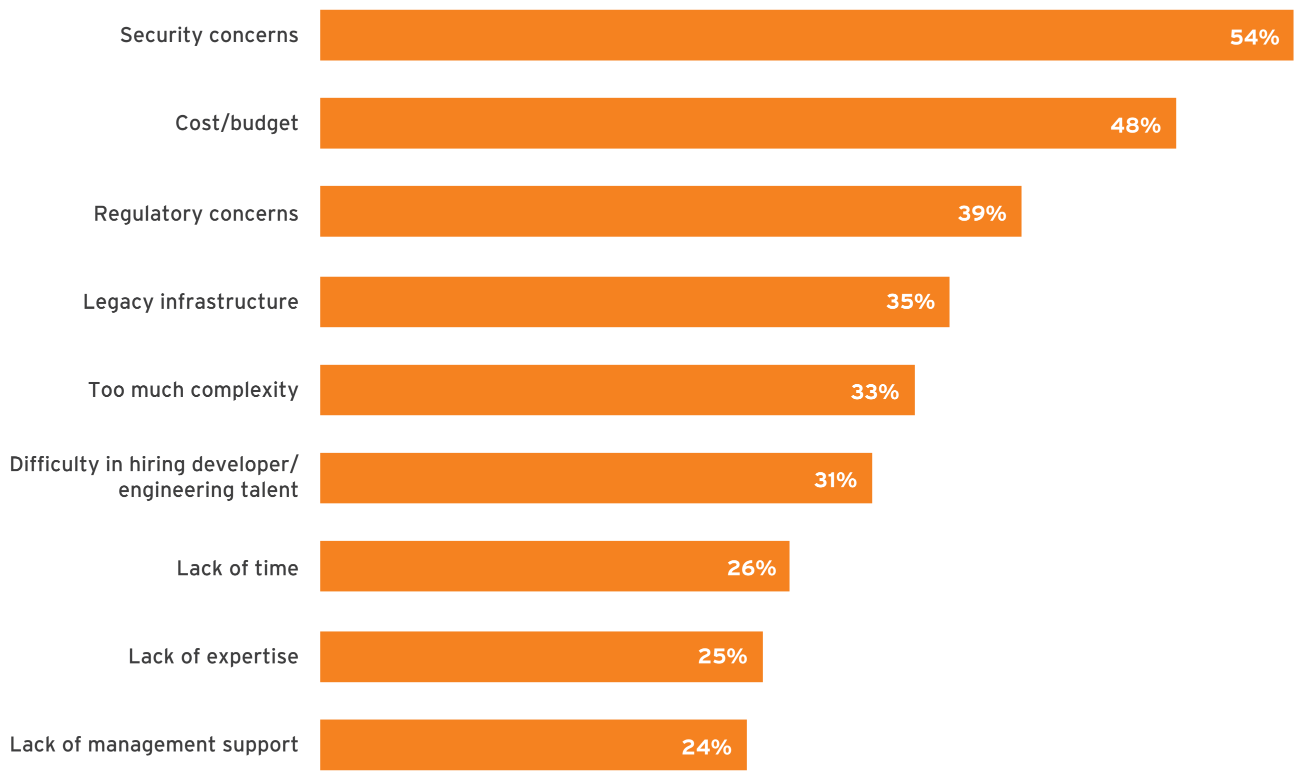


When looking to implement new payments and commerce technologies, security concerns again rank as the top obstacle, cited by more than half of respondents (Figure 5). Our results show that security concerns increase in parallel with the age of the organization; while 49% of companies in business for less than five years cited security as a pertinent obstacle, that number rose to 59% for companies operating more than 25 years. This is likely in part because older companies believe they have more at stake, but also because the safeguards they've put in place are outdated or inefficient. Cost/budget closely follows security concerns, cited by 48% of merchants, and regulatory concerns complete the top three. We believe that each of these three obstacles in some way stems from the legacy payments infrastructure that many enterprises have in place, throttling their ability to more rapidly and effectively adapt to change.

Figure 5: Obstacles to implementing new payment and commerce technologies

Source: 451 Research

Q: Thinking about your ability to implement new payment and commerce technologies, which of the following represent the most pertinent obstacles? (Select all that apply.)



Public Cloud is a Priority for Sophisticated Payment Teams

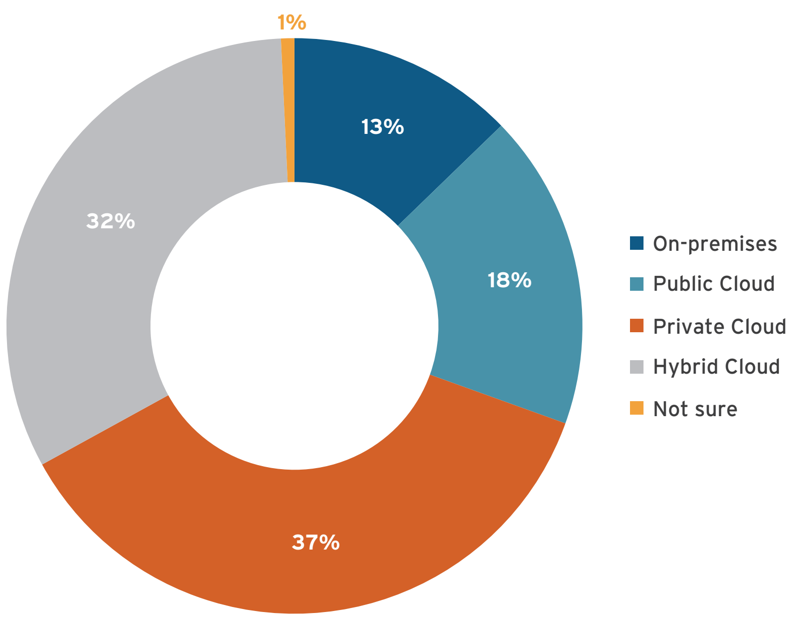
The vast majority of enterprise merchants are running some form of the cloud – public, private or hybrid – to support their payments infrastructures. As Figure 6 shows, 87% of respondents said they are utilizing the cloud as their dominant payments environment, compared to just 13% who said on-premises. Enterprises in business for more than 25 years are significantly more likely than those in business for less than five years to be running payments on-premises.

The public cloud has become an increasingly popular environment for enterprises to run payments functions for a variety of reasons that we discuss in the next section. Nearly one in five (18%) respondents told us the public cloud is the dominant environment supporting their payments infrastructure. Interestingly, businesses that view payments as 'highly strategic' are more likely to be using the public cloud than those that only see payments as 'somewhat strategic.'

Figure 6: The cloud is the dominant environment for payments infrastructure

Source: 451 Research

Q: What is the dominant internal environment supporting your organization's payments infrastructure?



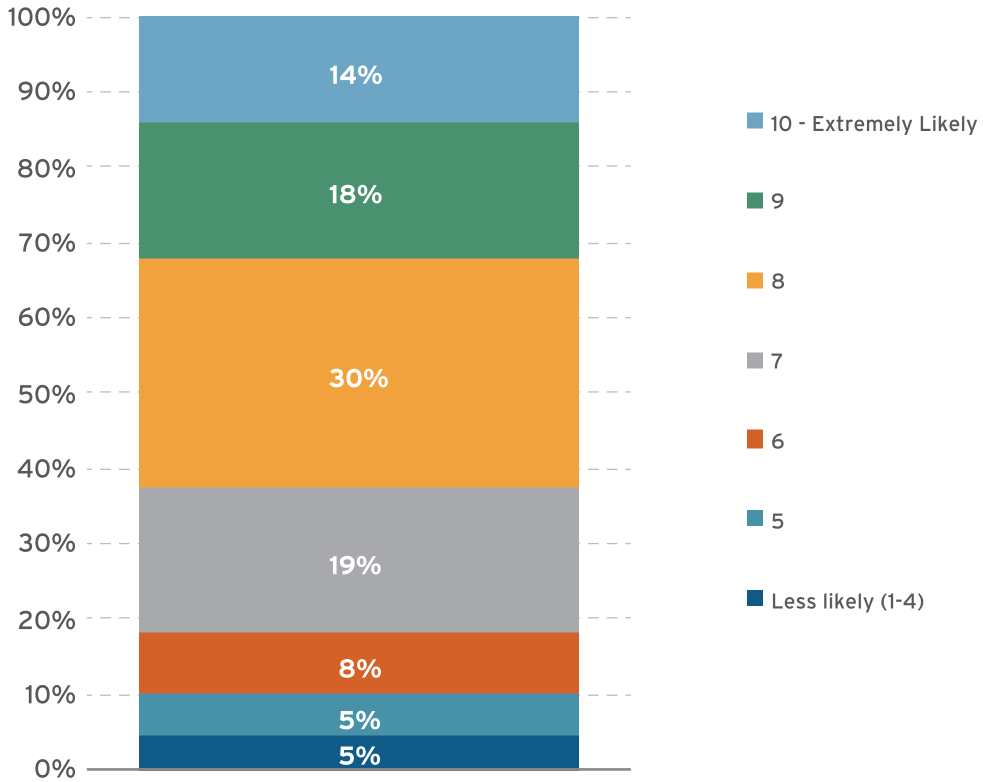
As shown in Figure 7, interest in working with a payments provider that uses the public cloud is high, with nine in 10 enterprises 'likely' (based on respondents that selected a '6' or higher) to consider one, and more than three in five 'highly likely' (based on respondents that selected an '8' or higher) to do so. The most significant interest comes from US enterprises, where 74% responded as 'highly likely.' Again, businesses that view payments as 'highly strategic' show the strongest affinity for the public cloud, with 70% 'highly likely' to consider a public-cloud-based payments provider, compared to 50% of those that only see payments as 'somewhat strategic.'

We also observed that utilization of the public cloud is becoming an important requirement that enterprises have for their payments providers. In fact, for enterprises with over $5bn in annual revenue, the top reason for considering switching payments providers is due to 'lack of use of the public cloud.'

Figure 7: A clear majority of enterprises would consider a payments provider built on the public cloud

Source: 451 Research

Q: How likely is your organization to consider using a payments provider that is built on public cloud infrastructure? Please use a 1-10 scale where 1 is 'Not at All Likely' and 10 is 'Extremely Likely.'



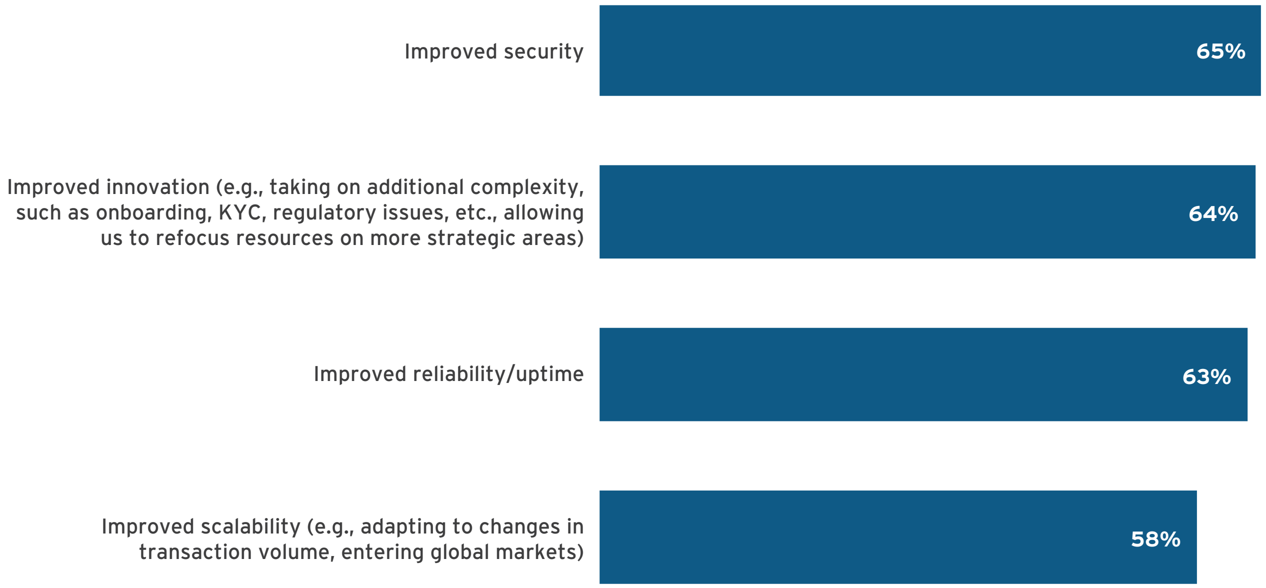
The Public Cloud Offers Security, Scalability, and Stability

Our research has revealed that enterprises using public cloud infrastructure for payments are realizing a variety of salient business advantages. As shown in Figure 8, nearly two-thirds of those using the public cloud for payments have seen improvements in security, innovation and uptime, while nearly three in five cited improved scalability. What's more, we found that enterprises working with public-cloud-based payments providers rated their provider significantly higher across each of these areas compared to those working with an on-premises-based provider.

Figure 8: Advantages from using public cloud infrastructure for payments

Source: 451 Research

Q: What are the key advantages your organization has seen from using public cloud infrastructure for payments?



Below, we double click into the criticality of security, innovation, uptime and scalability in payments and discuss the merit of public cloud in addressing each area.

Enterprises View the Public Cloud as More Secure

Security is always top of mind when it comes to payments. Our survey shows that it is the number one consideration enterprises have when selecting a payments provider, not to mention the top payments challenge they face and the top obstacle they cite when implementing new payments and commerce technologies. Enterprises that are using public-cloud-based payments infrastructure have turned this pain point into an opportunity – respondents cited improved security as the number one benefit they've realized from implementation.

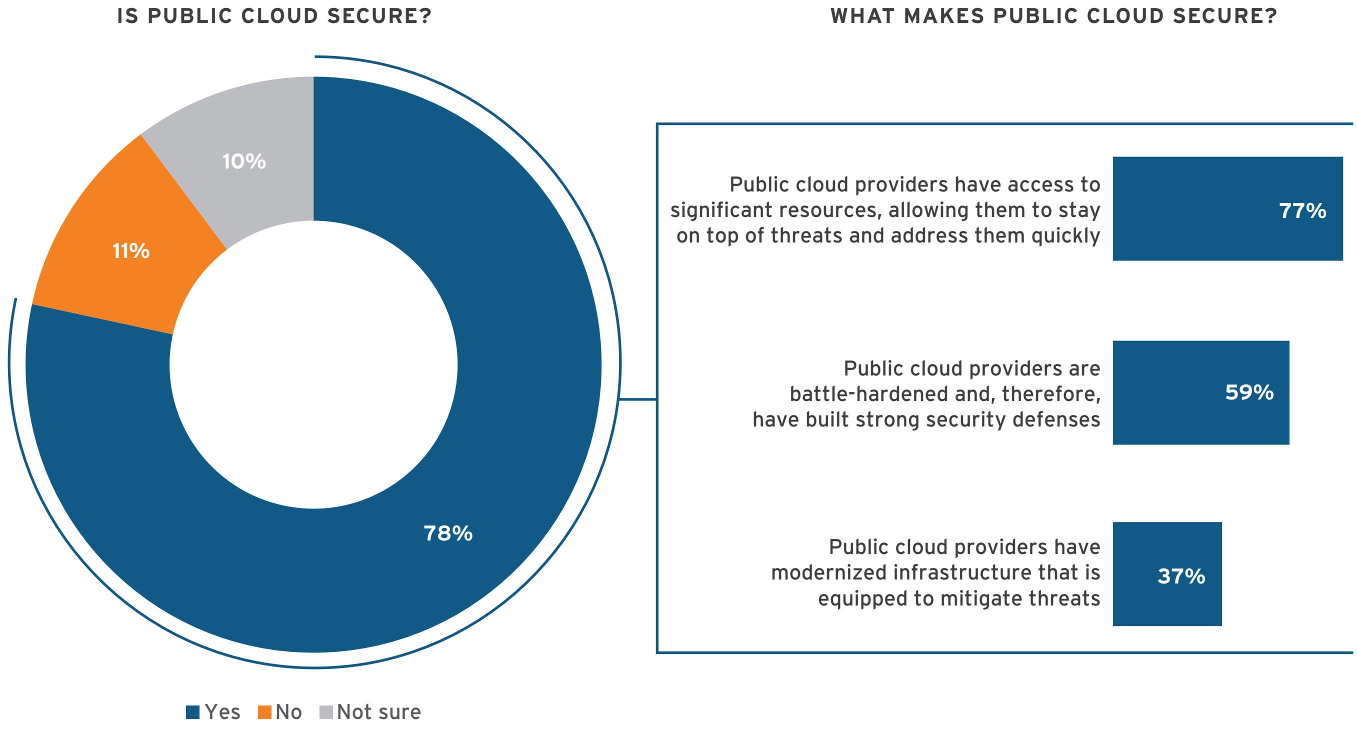
As shown in Figure 9, security perceptions of the public cloud among enterprises are favorable, with nearly four in five (78%) stating that it is secure enough to support their organization's payments infrastructure. Of those that share this viewpoint, 77% said it's because public cloud providers have access to significant resources, allowing them to stay on top of threats and address them quickly. This is a sentiment we agree with. Because of typical server depreciation cycles, private cloud providers are often unable to immediately switch out potentially compromised hardware (e.g., Spectre, Meltdown) compared to public cloud providers, which don't share these constraints. Furthermore, we believe hyperscalers benefit from being battle-hardened, given their massive footprints and experience in protecting against a variety of attacks.

Figure 9: Enterprises have a favorable view of the security of the public cloud for payments

Source: 451 Research

Q. Thinking about the public cloud (e.g. AWS, Microsoft Azure), do you feel it is secure enough to support your organization's payments infrastructure?

Q. If Yes: Why do you feel that the public cloud is secure enough to support your organization's payments infrastructure? (Select all that apply.)



Innovation to Deliver a Best-in-Class Payments Experience Globally

Tech-forward enterprises lean on their payments provider to help drive innovation and adapt to rapid market changes, such as integrating new services (new payment flows, pre-built checkout components, offerings, etc.) and addressing evolving regulatory requirements. We find this is a top requirement, with more than one in four enterprises that are considering switching payments providers stating it's due to lack of innovation. Failure to innovate also ranks at the second-most-cited reason for enterprises that are considering switching away from an on-premises-based payments provider.

We believe the public cloud offers a platform for innovation by giving payments providers and their end customers the flexibility to innovate without lock-in to specific hardware or software configurations. It also offers the benefit of limited up-front expenditure (e.g., save on hardware costs, support, lengthy contracts). This allows for offloading of operations, which ultimately frees up investment for more strategic areas, and creates more time to dedicate to building new features and products. Further, the improved deployment speed of public cloud allows for rapid updates and alignment with market changes.

Strong Reliability and Uptime

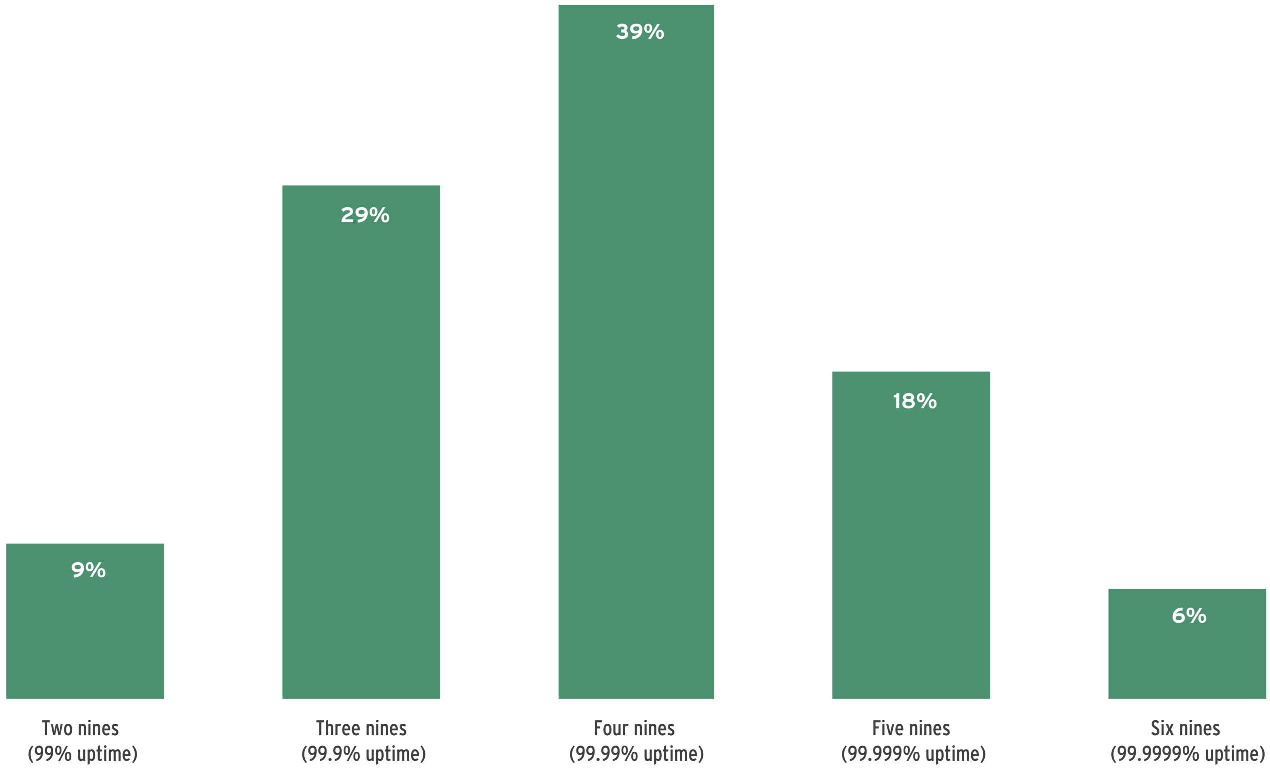
In commerce, downtime prevents customers from buying the products and services they desire, which means lost revenue. Aside from immediate revenue loss, a recent 451 Research study showed that downtime can also have long-term consequences, with nearly one-third of consumers stating that they're unlikely to return to an online business if there is an issue preventing their payment from being processed. Understandably, this is a critical concern for enterprises, with 'downtime' ranking as a top-two cause for merchants that are considering switching to a new payments provider. It's also a primary reason driving complexity in enterprises' partner ecosystems due to adding redundancies by working with multiple providers.

Hyperscale cloud providers are well regarded for their unmatched reliability and uptime, serving to minimize potential interruptions to the transaction while keeping revenue flowing and shoppers happy. When choosing a payments provider, we believe enterprises should select 'four nines' availability (99.99%) at a minimum to ensure the least amount of disruption and downtime (see Figure 10). Further, they should ensure their provider reports uptime publicly and transparently. The difference between 'three nines' and 'four nines' is significant: the latter translates into just a few minutes of downtime a year, while the former means hours of downtime annually.

Figure 10: Payments provider reliability

Source: 451 Research

Q. What is the minimum level of uptime you prefer from your payments provider(s)?



Scalability for Peak Shopping Seasons and Increased Traffic

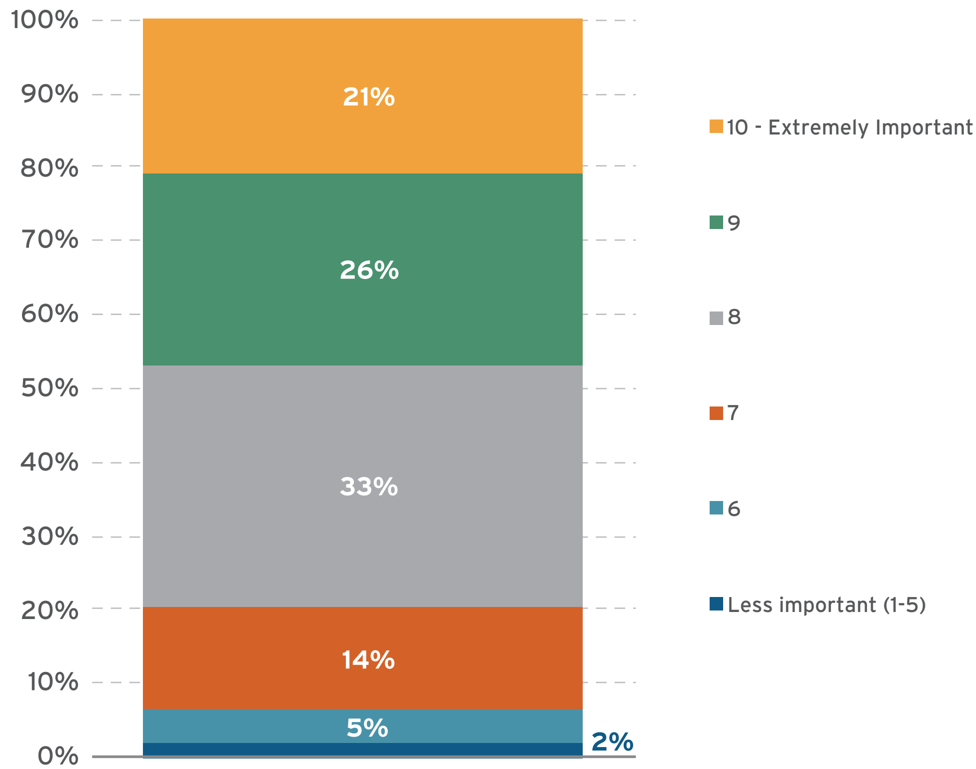
Payment providers and their end customers have a strong need for elasticity to accommodate fluctuations in transaction volume, which can shift drastically during peak shopping times, such as major sales or holiday shopping periods. The public cloud is designed to scale in real time to address these inevitable volume changes, growing at whatever speed is needed, as opposed to having to determine growth requirements in advance.

Similarly, merchants working with payments providers that utilize the public cloud can scale into new geographic markets with increased speed and efficiency. The resource requirement for doing so on their own is significant – which often entails an entirely new team of engineers for each region, negotiating terms with local merchant acquiring banks, establishing card network connections and integrating with local and regional alternative payment methods – meaning market entry is often measured in years, not months. Due to the significance of this task, four in five enterprises cited the ability of their payments provider to help support expansion into new markets as being very important (based on respondents that selected an '8' or higher) (see Figure 11).

Figure 11: New market expansion requirements

Source: 451 Research

Q: How important is it that your payments provider be able to help support your expansion into new markets quickly? Please use a 1-10 scale where 1 is 'Extremely Unimportant and 10 is 'Extremely Important.'



Conclusion

While payments processing is proving to be a strategic area of focus for many enterprises, there is no shortage of obstacles standing in the way of successful execution. From significant resourcing requirements to security concerns and regulatory changes, converting payments into a strategic advantage is easier said than done.

Many of the payments challenges confronting enterprises are exacerbated by the underlying infrastructure they (or their partners) use to accept and process customer payments. Outdated payments infrastructure can prolong the time it takes enterprises to adapt to market opportunities (e.g., add new products and services, enter new markets) while putting them at risk for downtime and limiting their scalability. The typical response is onboarding more providers for redundancy and local market support, creating a fragmented partner ecosystem that requires increased resources for vendor management and reconciliation.

Breaking this paradigm and shifting payments from a burden to an opportunity requires enterprises to make payments infrastructure a priority. Enterprises that view payments processing as 'highly strategic' are most likely to be utilizing the public cloud for payments. Furthermore, the majority of those enterprises report that using the public cloud for payments has resulted in improvements in security, scalability, uptime and innovation. With this in mind, we recommend that enterprises:

- **Put 'public cloud' on their payment provider evaluation criteria.** There are four critical attributes enterprises should look for in their payments provider: security, scalability, innovation and uptime. We believe that public cloud provides the strongest underlying infrastructure to support these attributes, and that payments providers using it are well-positioned to execute on each. Enterprises that make 'utilization of the public cloud' a key factor in their payments provider decision-making process are in a favorable position to select a partner that can help them harness the full potential of payments.
- **Seek partners that can make payments a strategic advantage.** A strong payments partner should abstract the many complexities of payments for enterprises, allowing them to offload resource-intensive tasks such as accepting transactions in new markets, integrating alternative payment methods, decreasing fraud/chargebacks and complying with regulatory changes (e.g., SCA and PSD2). Payments providers that can address these challenges while providing continuous uptime and scalability allow enterprises to focus more resources on their core business and make investments that deepen their differentiation in the market.
- **Consider working with a single, full-stack provider.** Our research shows that enterprises that view payments as 'highly strategic' are more likely than others to be working with a single, full-stack payments provider. We believe working with a single provider increases enterprises' operational efficiency, allowing for advantages such as improved reporting and streamlined reconciliation. Of course, not all providers are worthy of winning an enterprise's entire payments business. Organizations should only consider those that have sufficient market coverage, an end-to-end payments stack, a track record of innovation and unparalleled uptime.
- **Ensure their payments provider has engineering prowess.** Many payments providers create the illusion of being technology-forward and engineering-led, but few truly have a platform that is optimized for accepting payments across increasingly complex digital channels. When comparing providers, dig a few layers deeper to evaluate their integration capabilities, documentation and API libraries, their user interfaces, and their ability to support customization. Engineering sophistication should be an intrinsic part of your provider's platform, not a bolt-on.

About 451 Research

451 Research is a preeminent information technology research and advisory company. With a core focus on technology innovation and market disruption, we provide essential insight for leaders of the digital economy. More than 100 analysts and consultants deliver that insight via syndicated research, advisory services and live events to over 1,000 client organizations in North America, Europe and around the world. Founded in 2000 and headquartered in New York, 451 Research is a division of The 451 Group.

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