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CURRENTS

a seasonal report on developer and SMB trends in the cloud

Introduction

With our eighth edition of Currents we wanted to shake things up and look at the trends influencing developers at work. We decided to look exclusively at technical leaders and founders at small- and medium-sized businesses (SMBs).

We see these organizations as the unsung heroes of the global economy as the size and scale of their output dwarves even the world's largest companies. Collectively, SMBs represent close to 90% of all registered businesses and employ half of the world's workforce.

Despite their large footprint, when it comes to cloud services, SMBs remain underserved relative to their enterprise counterparts. They often face unique technical challenges and constraints when it comes to deploying new technology, yet there's comparatively little focus on this relative to larger organizations.

Our original goal was to understand what's most important to SMBs, where their unique challenges lie, and what's keeping them up at night. But then the world changed, and SMBs became among those hardest hit by the economic impacts of COVID-19.

The resulting report includes responses from 500 founders and technology decision-makers at small and medium tech companies (under 1,000 employees), collected in June 2020. Their responses provide unique insight into larger technical challenges, but also how business processes are changing in light of COVID-19.

Key findings include:

- **Technical infrastructure challenges make it difficult for new businesses to get started.**
  Technical infrastructure challenges continue to be a barrier to entry for new businesses. Of the half (51%) of respondents who were company founders, 71% cite the cost of maintaining technical infrastructure as the top technical barrier. Other common challenges are know-how around maintaining technical infrastructure (65%) and the costs to lift and shift part or all of infrastructure (57%). Broadly, these businesses need to be able to experiment (and recognize when it's time to move on) quickly and cost-effectively. Many startups have one key application. They are not like their larger enterprise compatriots with multiple lines of business. If a company's new, cloud-based tech doesn't work behind the one thing they do well, it can be disastrous for the business.

- **IT and cloud security are top priorities for SMBs, as well as remote hiring.**
  IT security is a top concern for the majority of small and medium businesses: 59% rank it as their number-one priority, and 91% rank it among their top three priorities. Security needs to be embedded in their environment, since the vast majority of small businesses either lack the technical expertise and/or can't afford to invest in the time required to manually oversee every aspect of cloud security. Ensuring a smooth transition (without creating another liability) when deploying new technology is a key concern here. Cloud spending is also a high priority, though it ranks slightly below IT security. Thirty-nine percent say it is their number-one priority, while 84% rank it in their top three. SMBs prioritize security over factors like reliability

and affordability when evaluating a cloud service, particularly features such as firewalls and data protection. Additionally, 40% of respondents say that more than half of the technical positions they are hiring for offer the ability to work remotely.

- **Demand for digital services in India outpaces the U.S.**
  With the world's fifth-largest GDP and one of the fastest-growing cloud adoption rates globally, India is a major cloud services market. Forty percent of respondents in India say that more than half their company's annual technology budget goes toward cloud services, compared to 15% in the U.S. There is also greater demand for cloud infrastructure in the next 3-6 months, with 80% of respondents in India reporting that they have plans to increase their cloud investment, versus 55% in the U.S. The largest difference between these regions was in hiring, with 63% of Indian respondents saying they've increased hiring targets as a result of COVID-19, compared with 30% in the U.S.

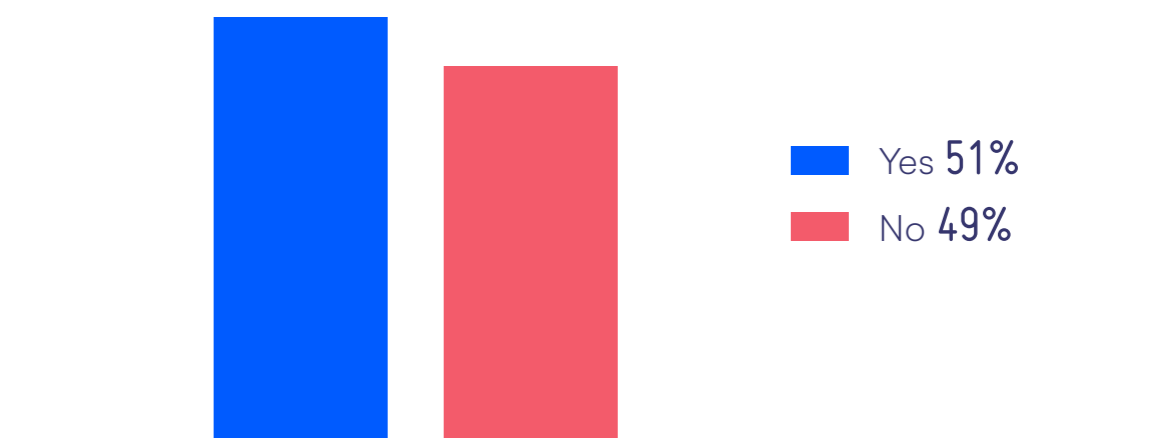- **COVID has impacted SMB security, cloud spend, and hiring.**
  The pandemic has impacted a range of key technical areas for SMBs. Sixty-three percent of respondents say that COVID-19 impacted their approach to IT security, resulting in increased investments in multi-cloud disaster recovery availability and reliability, security audits, and data leakage prevention. As a result of the pandemic, SMBs have made investments in cloud technologies as they transitioned to remote work and prioritized resilience. Meanwhile, hiring has remained steady or increased. Seventy-four percent say they either increased or maintained hiring targets during COVID.
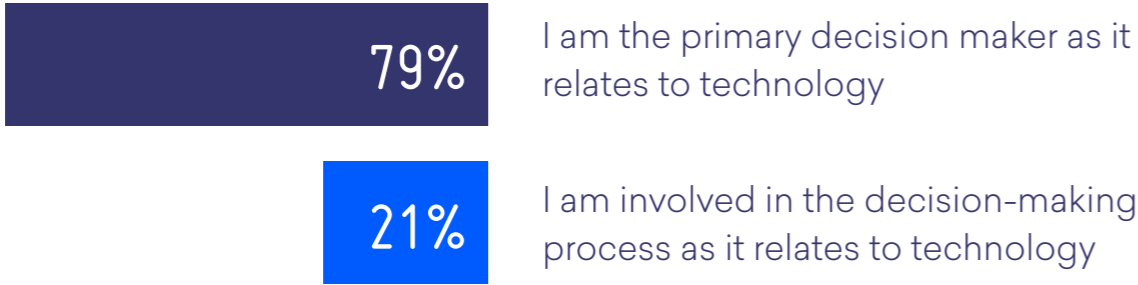
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What's on founders' minds?

Just over half (51%) of all survey respondents were founders or cofounders of their companies, while the remainder were technical decision makers. Here's a look at what's most important to SMB founders, 88% of whom indicated that they had launched their first companies.
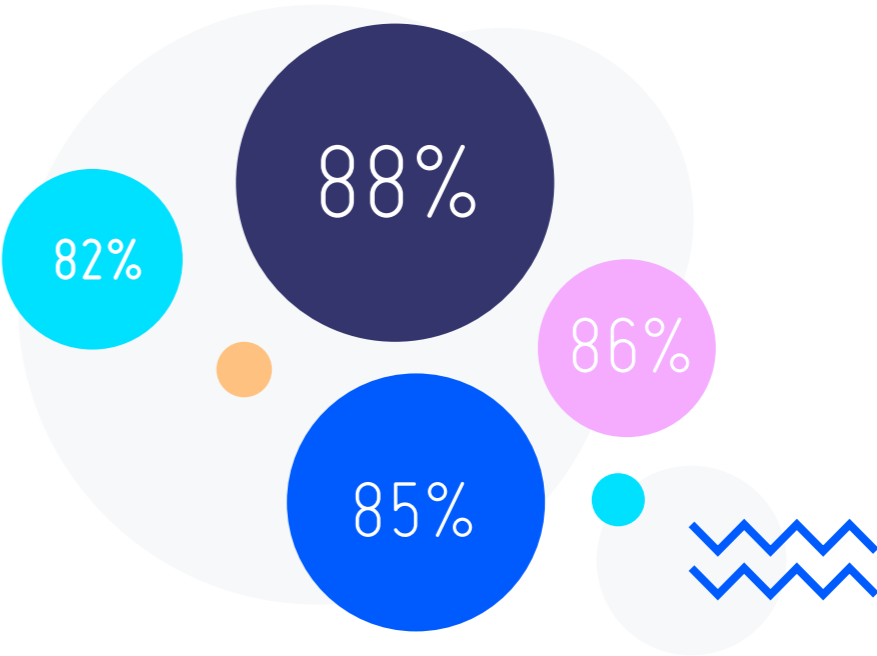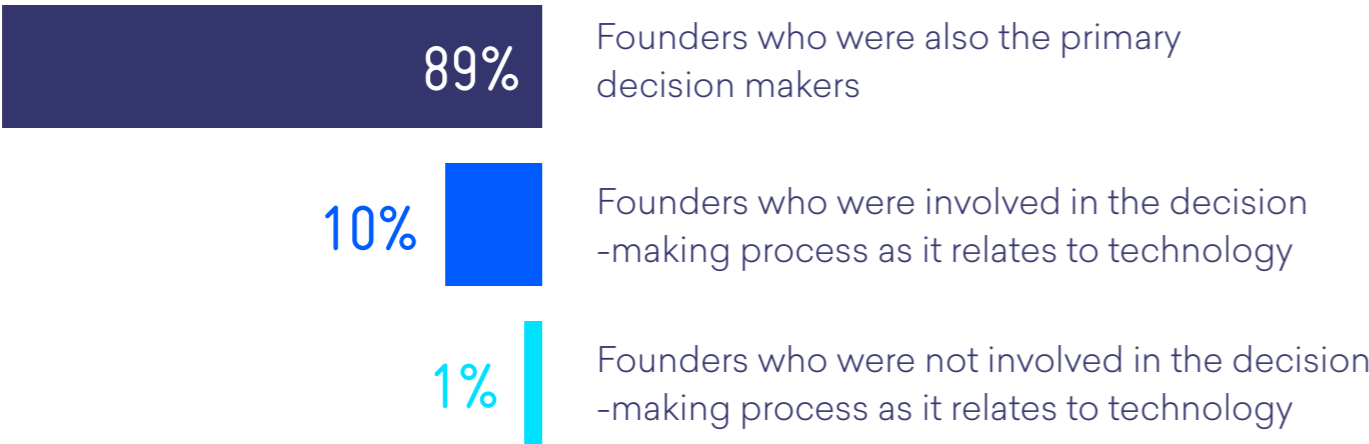
Respondents who have founded or cofounded a company in the past 5 years:

■ Yes **51%**
■ No **49%**

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Respondents' involvement in technical decision making:

79% — I am the primary decision maker as it relates to technology

21% — I am involved in the decision-making process as it relates to technology

Respondents who were both founders & technical decision makers:

89% — Founders who were also the primary decision makers

10% — Founders who were involved in the decision-making process as it relates to technology

1% — Founders who were not involved in the decision-making process as it relates to technology
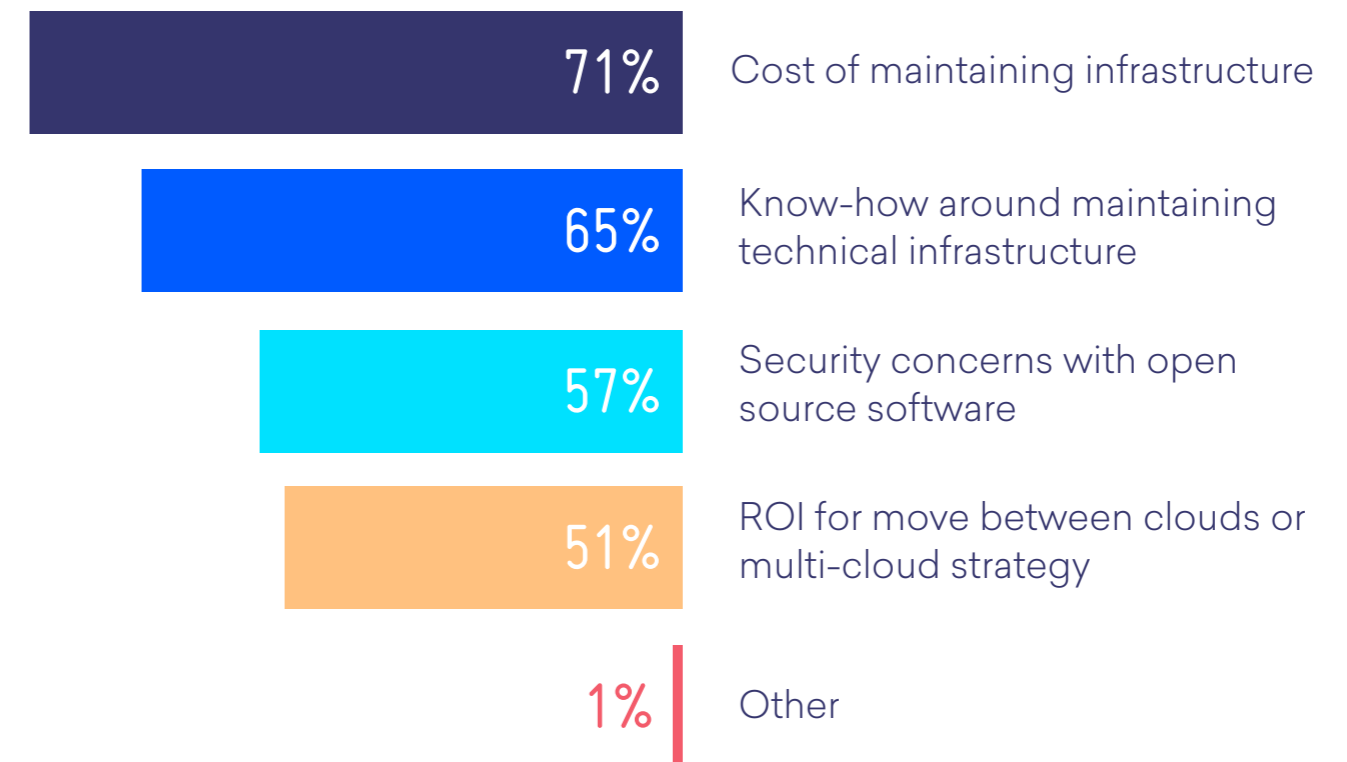
88%

82%

86%

85%

Eighty-eight percent of founders indicated their current company is the first they've started. Of the 85% of startups with a dedicated IT team, 82% have IT teams of at least four members or more. Among founders who do not have a dedicated IT team, 86% manage IT themselves.

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Most helpful resources when implementing a new technology service:

- Software development 101 meetups
- Technical tutorials
- An informal network of peers, mentors and advisors
- YouTube

What technical barriers to entry do you believe currently exist for new businesses?

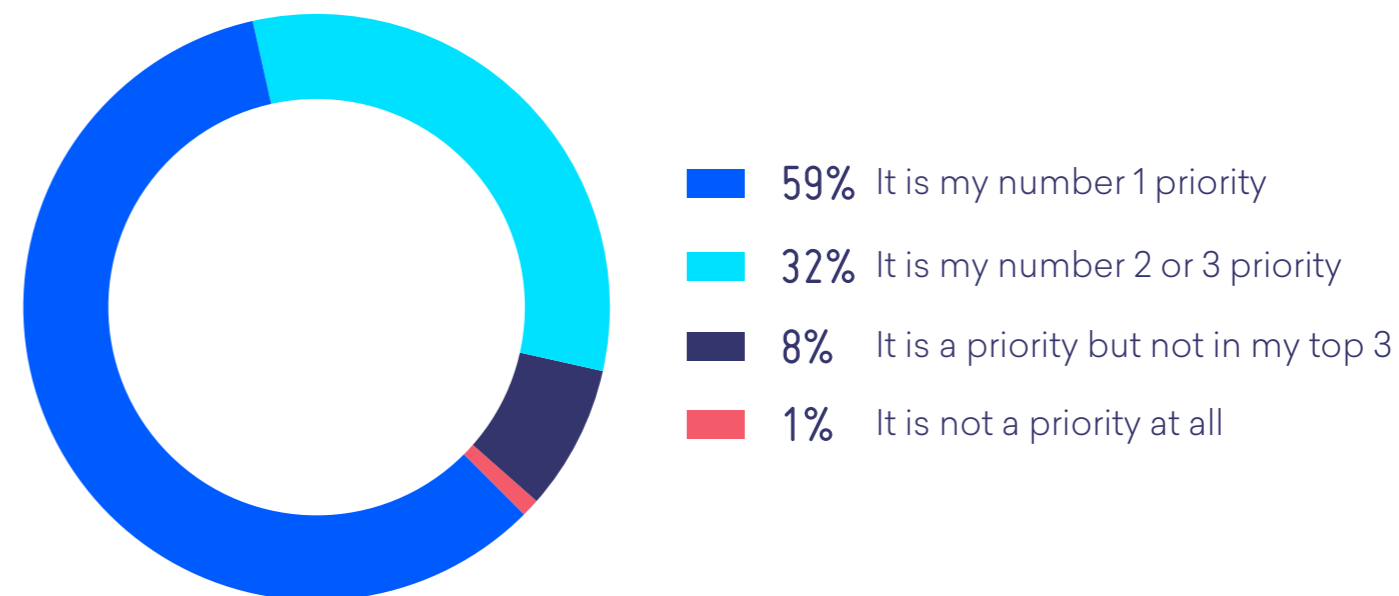|	
71%	Cost of maintaining infrastructure
65%	Know-how around maintaining technical infrastructure
57%	Security concerns with open source software
51%	ROI for move between clouds or multi-cloud strategy
1%	Other

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# IT security priorities & concerns

IT security is a top priority for the majority of small and medium businesses: 59% rank it as their top priority, while 91% rank it among their top three priorities. It also accounts for a large percentage of company spending, with nearly a quarter (23%) of respondents saying that more than half their company's budget goes toward IT security.

How much of a priority is IT security to you?

- **59%** It is my number 1 priority
- **32%** It is my number 2 or 3 priority
- **8%** It is a priority but not in my top 3
- **1%** It is not a priority at all

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" **IT security is the top concern for SMBs.** "

What percentage of your company's budget goes toward IT security?

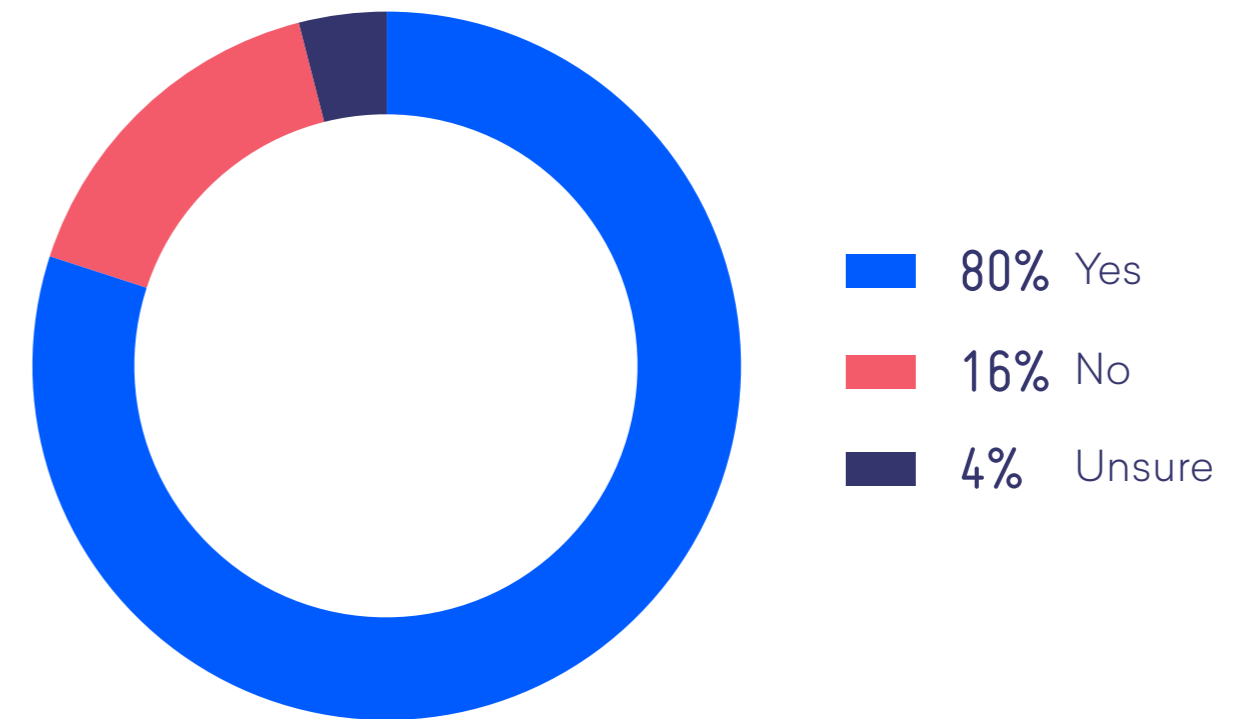|	
Less than 5%	11%
6-10%	18%
11-19%	24%
20-49%	23%
50-74%	16%
75% or more	7%
Unsure	1%

0% 5% 10% 20% 30%
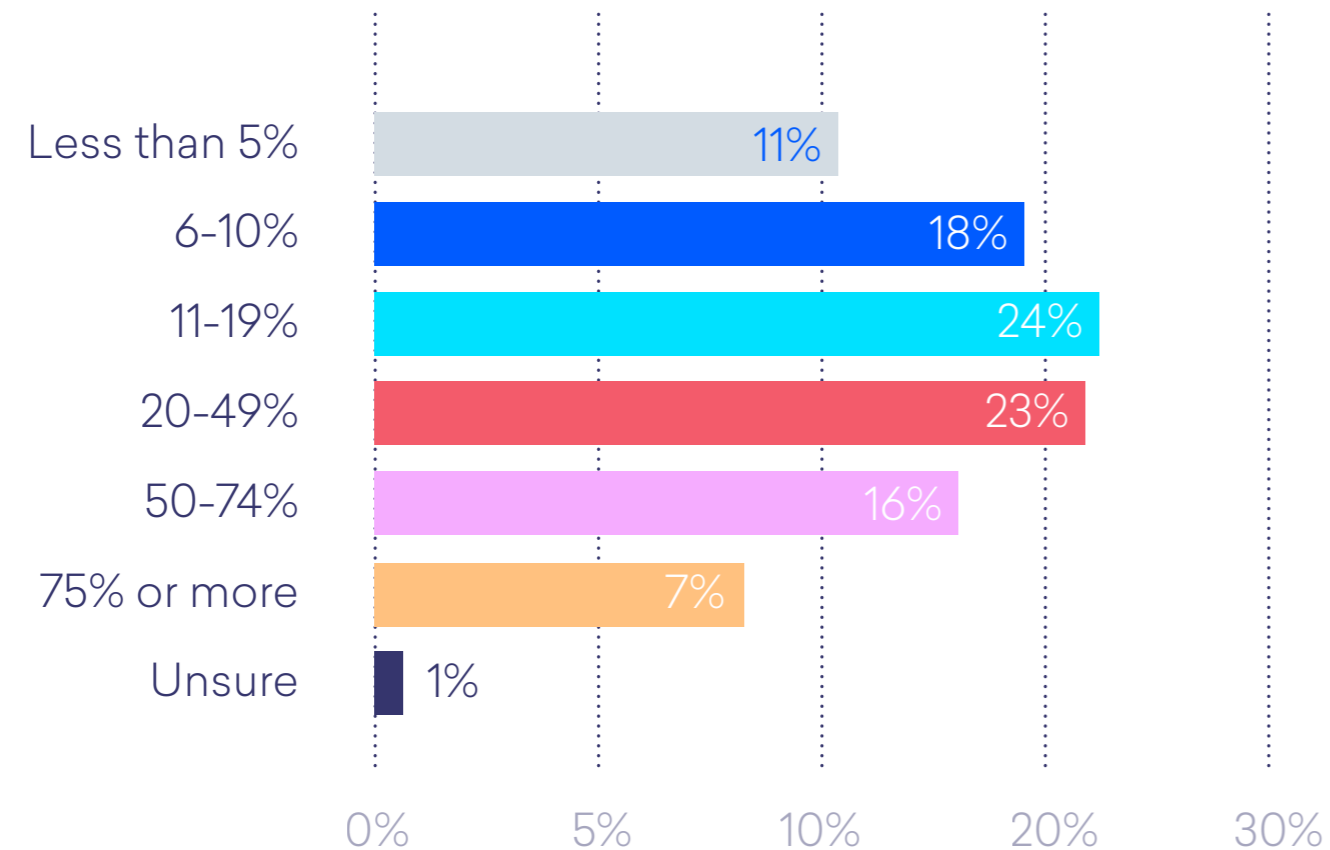
Respondents' top concerns with regard to IT security are understanding new threats, firewall/network security issues, and antivirus/anti-malware issues. Eighty percent of respondents deploy specific security measures for their company's cloud-based infrastructure. The two most commonly used security measures are operating system updates and management, and firewalls.

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What's keeping SMB founders and technical leads up at night?

❓ **Understanding new security threats**

🗔 **Firewall/network security issues**

🛡 **Antivirus/anti-malware issues**

📄 **Employees who do not follow IT security guidelines**

📱 **Identity and access management**

Does your company deploy specific security measures for your cloud-based infrastructure?

- **80%** Yes
- **16%** No
- **4%** Unsure

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What security measures does your company deploy for your cloud-based infrastructure?

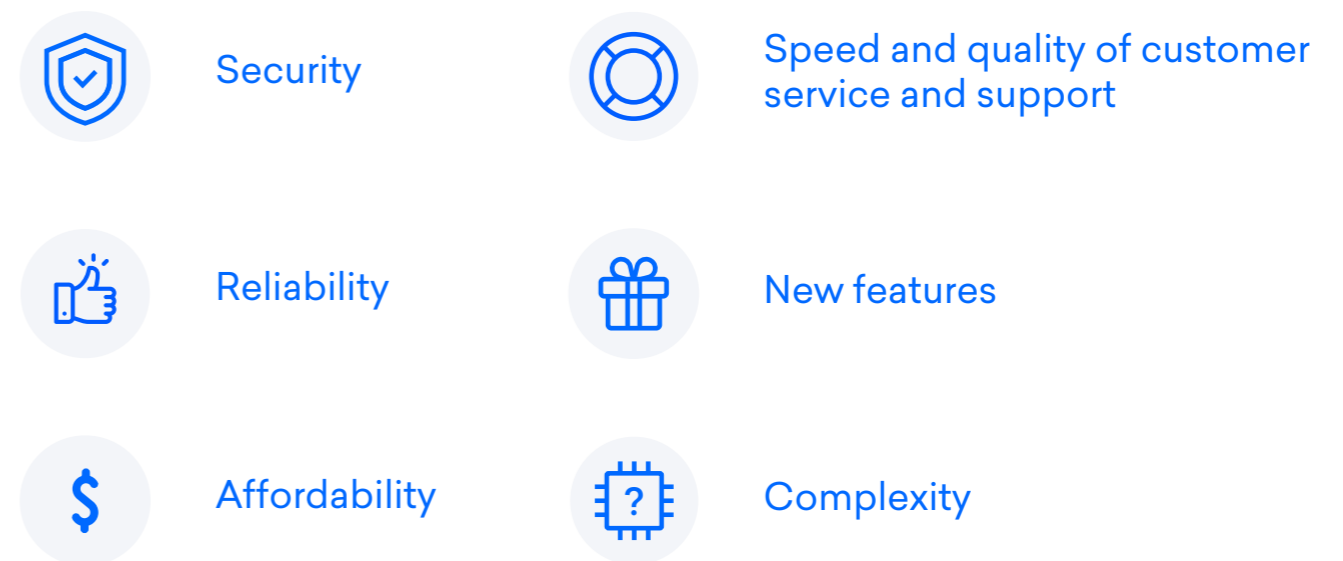|	
73%	Operating system updates and management
72%	Firewalls
69%	Data encryption
68%	Identity and access management
1%	Other

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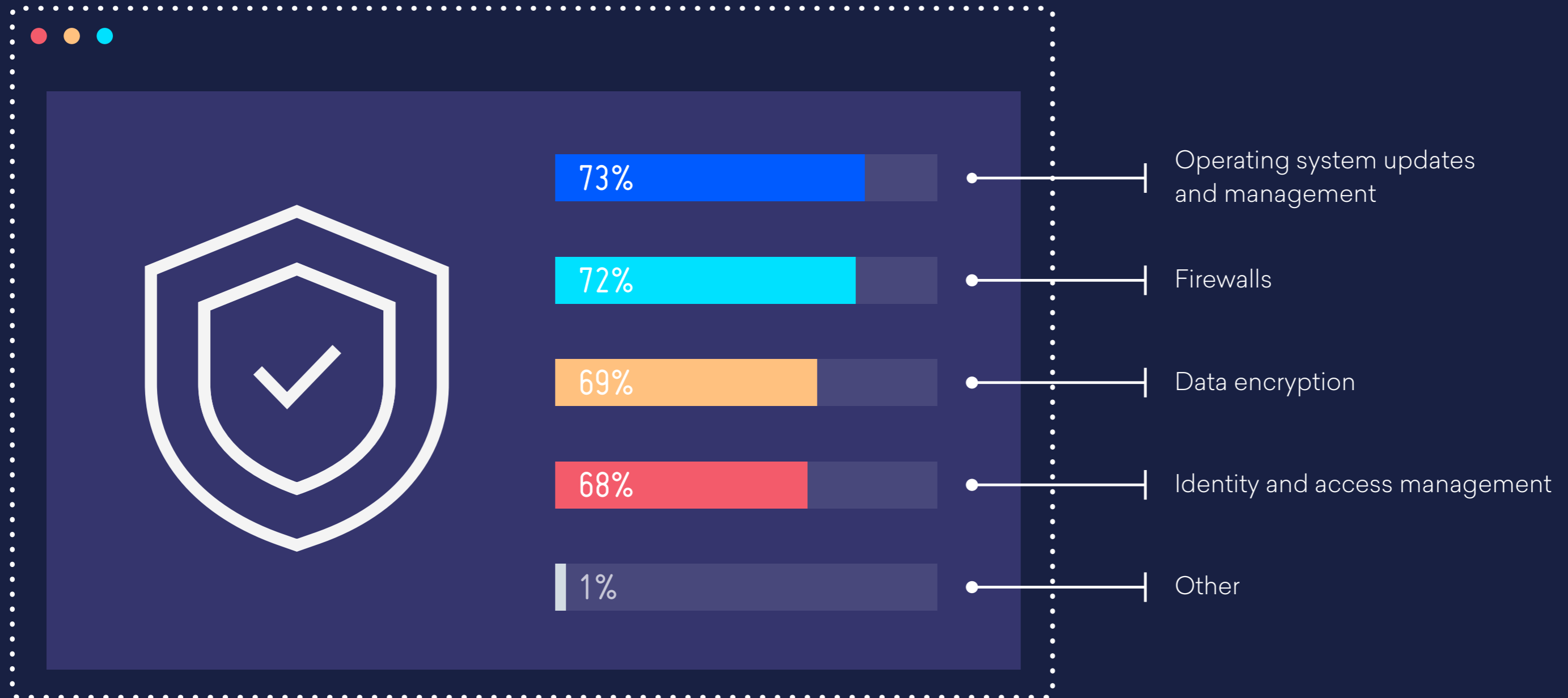
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SMB cloud spending trends

Cloud spending is also a high priority, though it was not ranked as highly as IT security. Thirty-nine percent rank it as their number one priority, and 84% rank it in their top three priorities.

When evaluating and purchasing a cloud service, SMB founders and tech leaders prioritize security over factors like reliability and affordability. Security features like firewalls and data protection are the two most essential features for decision makers when evaluating cloud services.

What's keeping SMB founders and technical leads up at night?

Security

Speed and quality of customer service and support

Reliability

New features

Affordability

Complexity

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Most essential features when evaluating cloud services:

Security (e.g. firewalls)

Data protection

24/7 support

Compatibility

Disaster recovery

Most (60%) of respondents say that lower prices for cloud services would make cloud spending more worth the investment, followed by better customer service and support (33%) and more features at the same cost (27%).

What would make your cloud spend more worth the investment?

Lower prices	60%
Better customer service and support	33%
More features at the same cost	27%
Less downtime	13%
More one-off discounts	13%
Other	7%
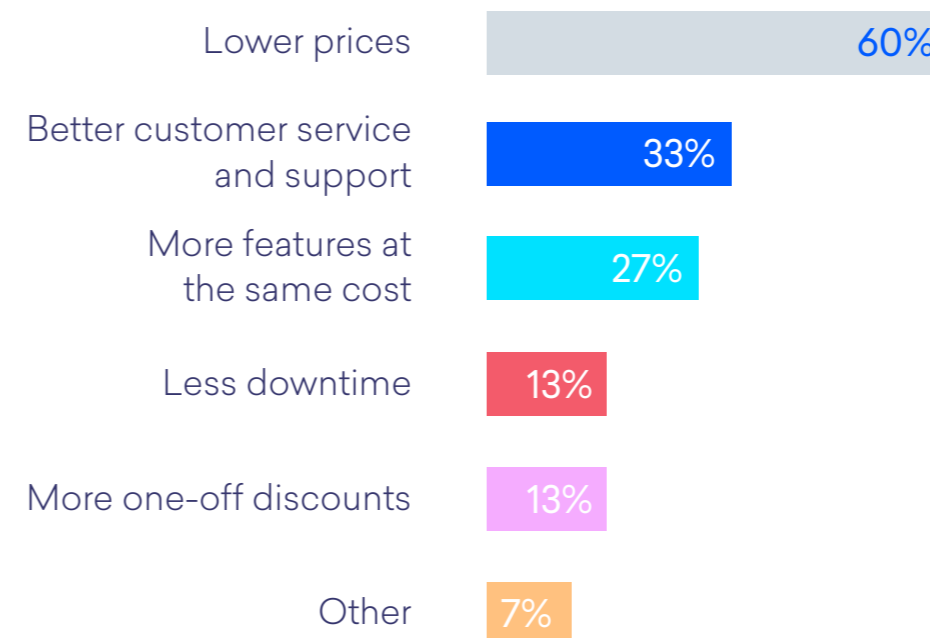
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# Recruiting plans & in-demand skills

Like most organizations right now, SMBs are continuing to embrace remote work options. When asked in June, 40% of respondents report that more than half of the technical positions they are hiring for offer the ability to work remotely.

For the technical positions you are hiring for, what percentage offer the ability to work remotely?

7%	Less than 5%
11%	6-10%
15%	11-19%
22%	20-49%
23%	50-74%
17%	75% or more
5%	Unsure

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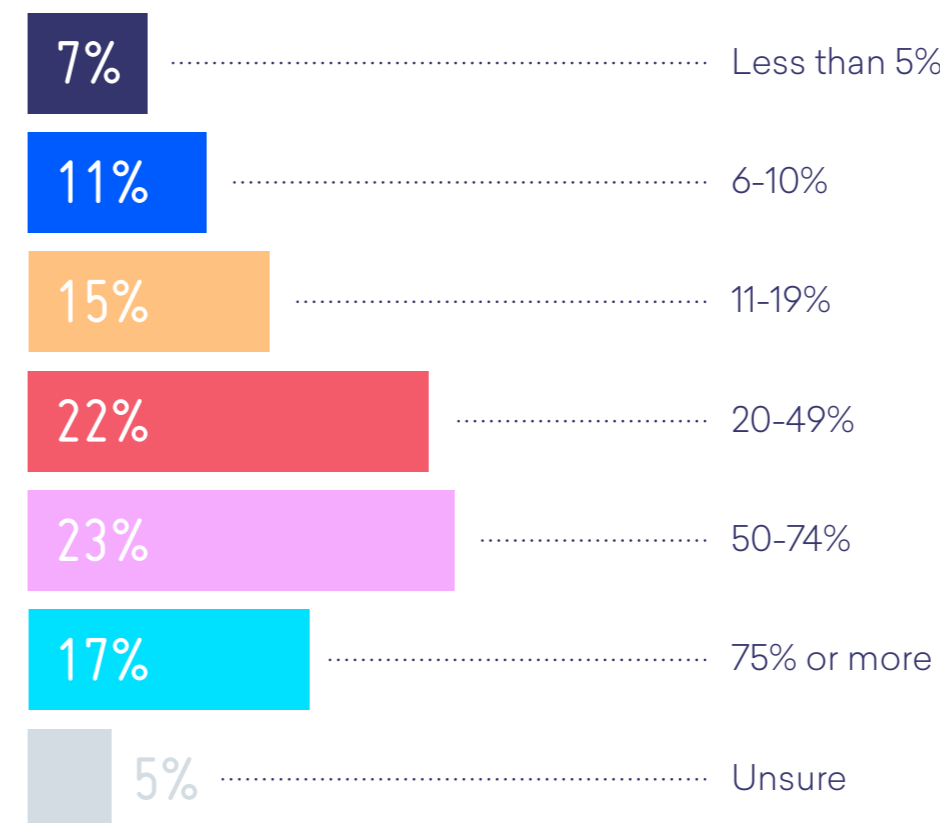
The most in-demand roles among respondents are service reliability engineer, DevOps manager and frontend developer/engineer. The most sought-after soft skills for IT candidates include teamwork, effective communication skills and dependability.

What roles are in demand at your company right now?

Role	Percentage
Service reliability engineer	43%
DevOps manager	40%
Frontend developer/engineer	39%
Backend developer/engineer	38%
Solutions architect	35%
Other	1%
None of the above	18%
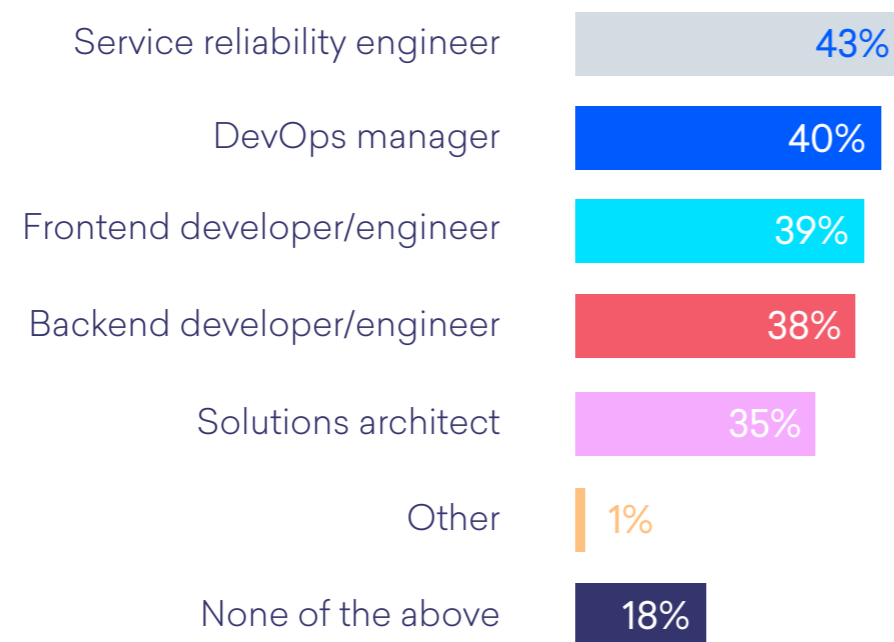
Top soft skills for IT candidates:

1. Teamwork

2. Effective communication skills

3. Dependability

4. Problem-solving

5. Adaptability

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India: Growing demand for digital services in the world's next tech hot spot

Our survey made it clear that the demand for digital services in India is huge and outpaces U.S. demand in areas like IT security and cloud adoption. As India's startup ecosystem and developer community continue to grow, the adoption of cloud and IT services will only accelerate.

30%
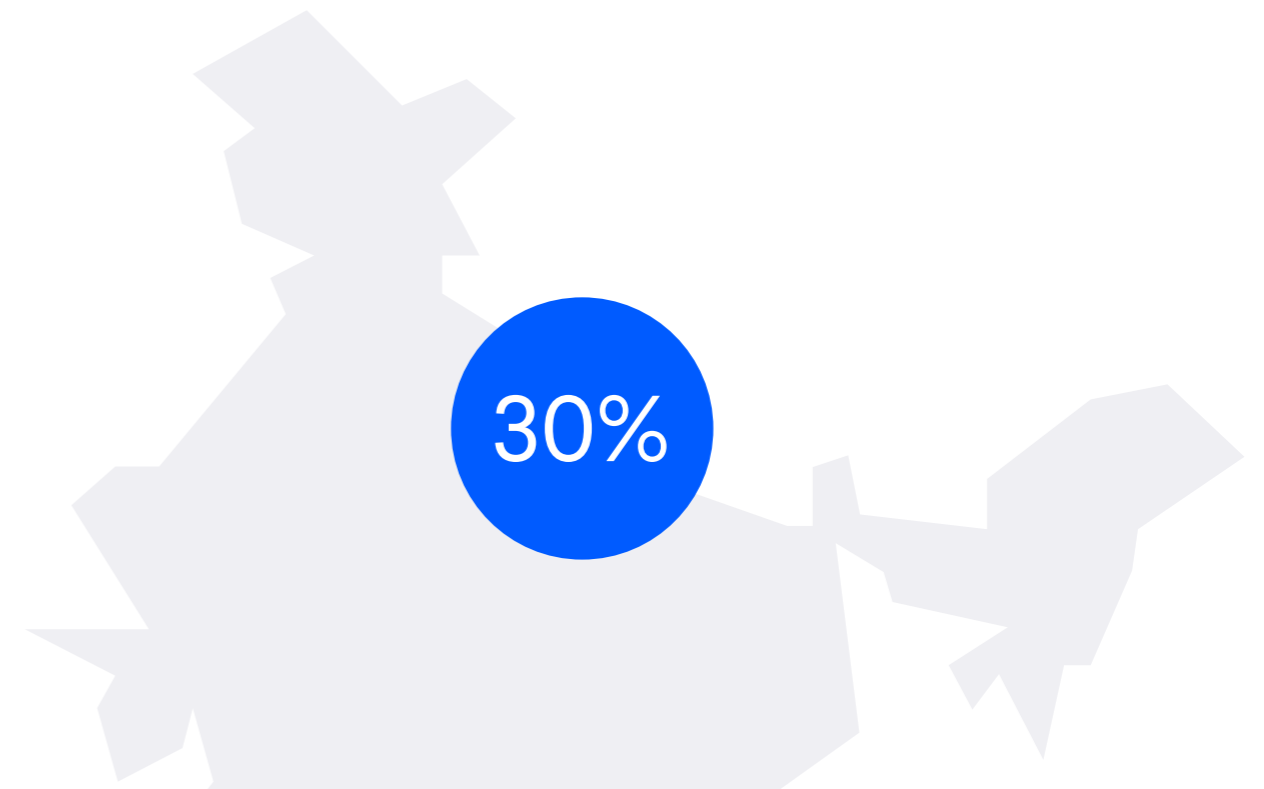
About 30% of survey respondents were from India, compared with 50% from the United States. Respondents in India reported greater spending on IT security and the cloud, higher demand for cloud services in the next 3–6 months, and significantly more ambitious hiring targets. These findings all point to India as the next digital hot spot.

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More than half of the company's budget goes to IT security

India		40%
United States		20%

More than half the company's annual technology spend goes to the cloud

India		40%
United States		15%

Increased hiring targets as a result of COVID-19

India		63%
United States		30%
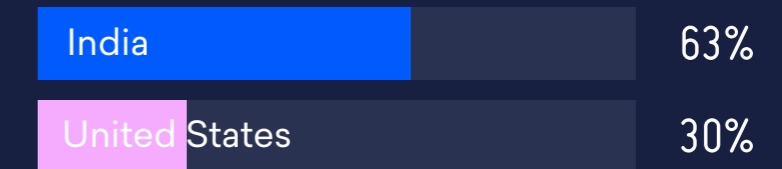
Deploy specific security measures for cloud-based infrastructure

India		91%
United States		79%

Plan to increase cloud infrastructure investment in the next 3-6 months

India		80%
United States		55%

Rank cloud spend as their number one priority

India		56%
United States		36%

Looking to increase their pool of technical talent

India		59%
United States		22%
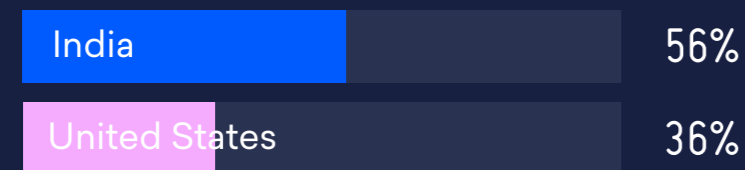
Key differences between Indian & American respondents

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The impact of COVID-19 on IT priorities

COVID-19 has made IT security top of mind. Amid a less secure remote work environment and many unknowns, companies are taking steps to strengthen security measures.

Sixty-three percent of respondents report that COVID-19 has impacted their approach to IT security. By far the most commonly cited impact is an increased investment in multi-cloud disaster recovery availability and reliability (70%). Over half (54%) reported that they have conducted security audits with policy compliance as a result of COVID-19, while 48% acquired a data leakage prevention solution and 45% required VPN. Given these trends, we believe that virtual private clouds (VPCs) may also see a rise in popularity as a result of COVID-19.

Has COVID-19 impacted your approach to IT security?

63% Yes

37% No

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How has COVID-19 impacted your approach to IT security?

Increased investment in multi-cloud disaster recovery availability and reliability   70%

Conducted security audit with policy compliance   54%

Acquired data leakage prevention solution   48%

Required VPN   45%

Other   2%
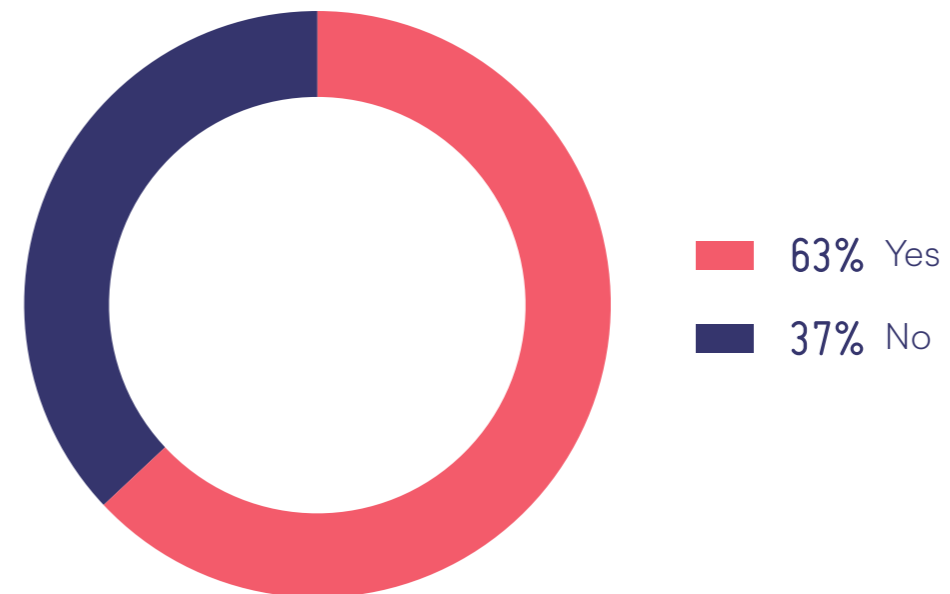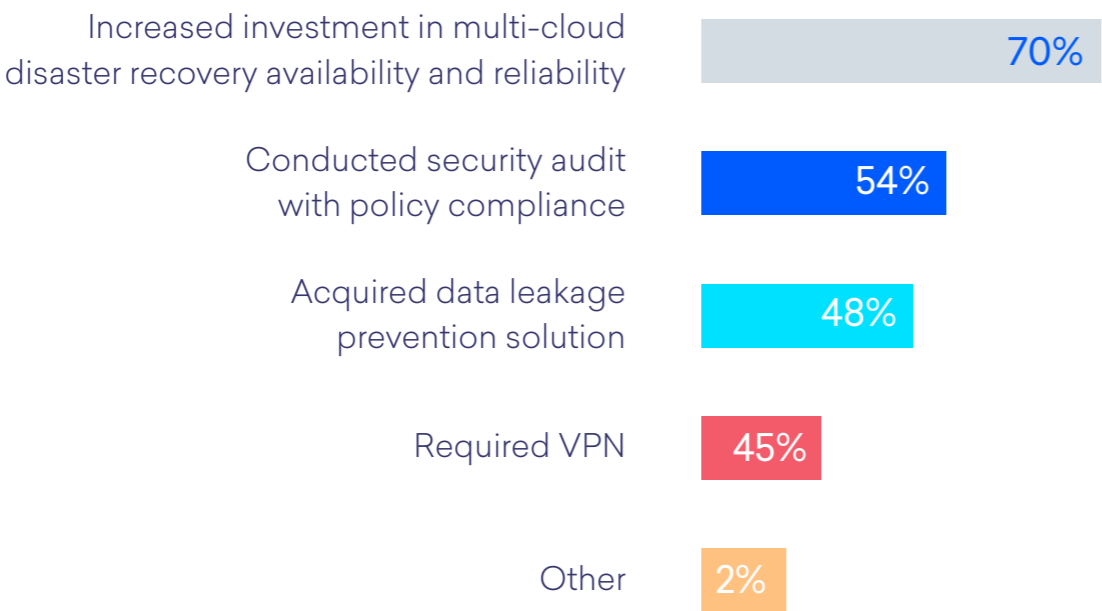
COVID-19 also illustrated the need for companies to have crisis plans in the event that employees have to work remotely for the foreseeable future. Eighty percent of respondents say that their IT department is aligned on maintaining company functions across remote environments.

How aligned is your IT department to maintain company functions across remote environments?

Very aligned   42%

Aligned   38%

Somewhat aligned   14%

Not very aligned   3%

Not aligned at all   2%
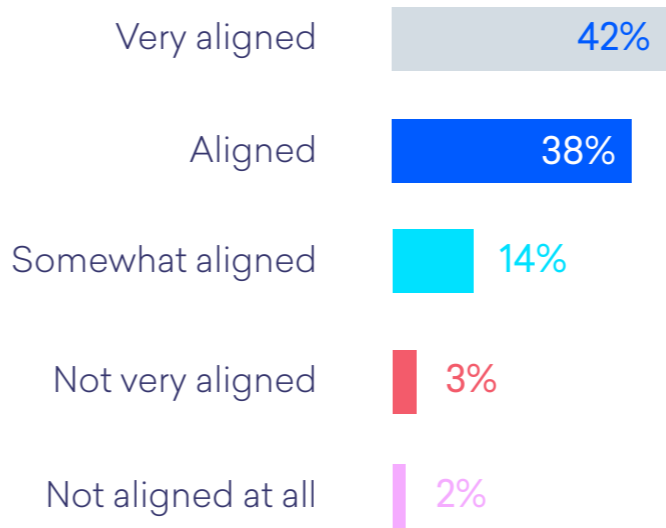
COVID-19's impact on cloud spend

When COVID-19 spread across the globe, SMBs and enterprise companies alike made investments in cloud technologies as they transitioned to remote work, while most companies plan to increase or expand even further in the future.

Sixty-two percent of respondents say that they expanded or upgraded their cloud usage during COVID-19, while only 2% consolidated or eliminated it. In fact, 60% are planning to increase their level of cloud infrastructure investment in the next 3-6 months, and only 6% are planning to decrease it. Among the most cited reasons for expanding/upgrading are the need to increase storage, the need to increase bandwidth and the need for disaster recovery and backup options. SMB and large enterprises will need tools to manage multiple cloud requirements as they spread applications and data across service providers. Simple tools help reduce the complexity for SMBs with limited resources.

Considering the increase in cloud spend across both SMB and enterprise organizations, we believe that it is more important than ever for cloud providers to account for SMBs' unique technical requirements. As we discussed above, founders find the costs and know-how associated with maintaining cloud infrastructure are to be key technical barriers. Thus, first-time founders may be particularly frustrated during the COVID-19 period if they are required to both increase cloud spend and infrastructure while overcoming these barriers. The solutions have to be affordable, safe, and reliable.

From January to June 2020, how did your company's cloud usage change?
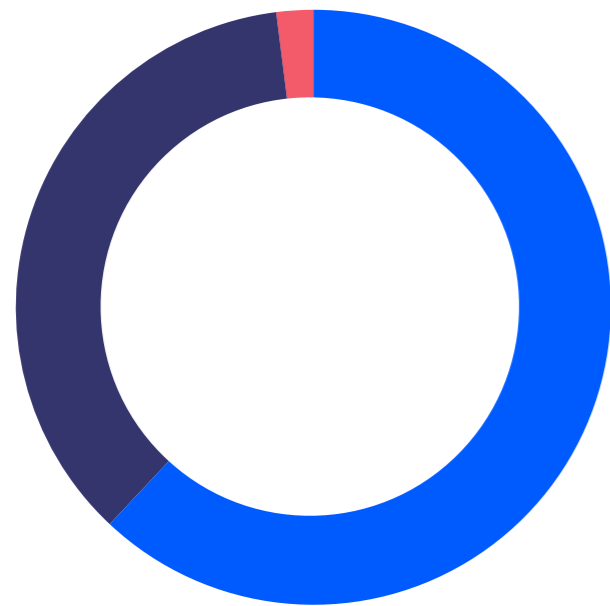
■ **62%** Expanded/upgraded it

■ **36%** Left it the same

■ **2%** Consolidated/eliminated it

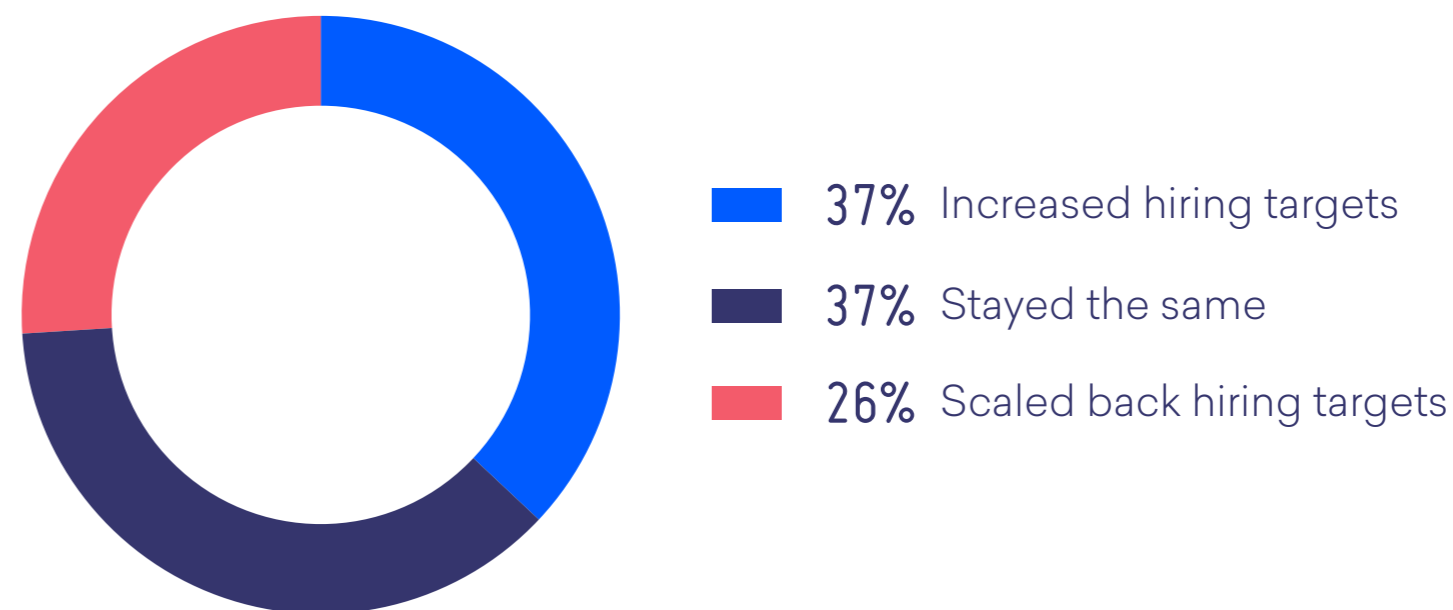## Top 5 reasons companies expanded or upgraded cloud usage during COVID:

1. To increase storage

2. To increase bandwidth

3. Needed disaster recovery and backup options

4. Needed multi-cloud options for availability and failover

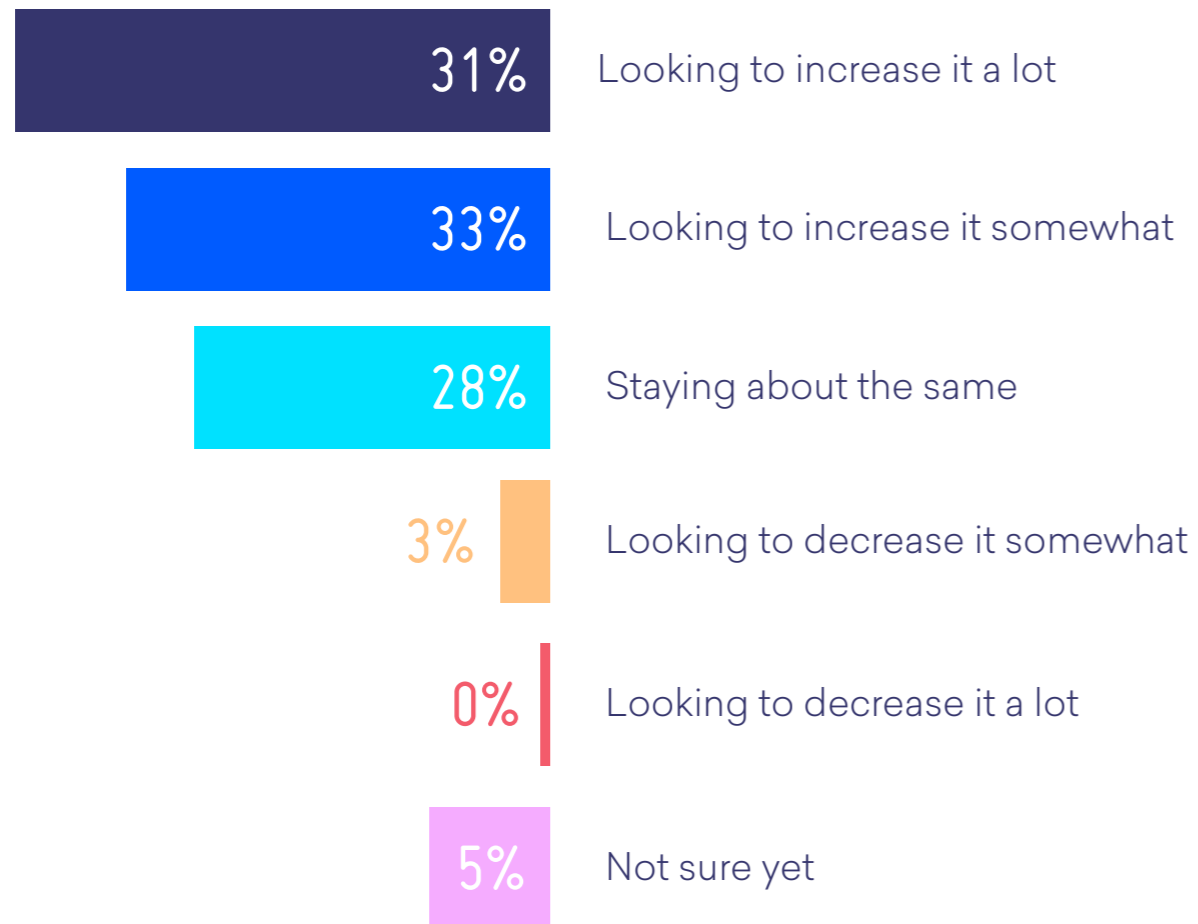5. To reduce in house cloud costs

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Recruiting priorities amid a new way of working

Despite the massive economic disruption brought on by COVID-19, most respondents have not scaled back on hiring and plan to maintain or increase talent pools in the future. Seventy-four percent of respondents say they either increased or maintained hiring targets, while only 26% have scaled them back. Hiring plans for the future are also optimistic: 64% are looking to increase their pool of technical talent, while only 3% are looking to decrease it.

What impact has the COVID-19 pandemic had on your hiring plans?

37% Increased hiring targets

37% Stayed the same

26% Scaled back hiring targets

Are you looking to change your pool of technical talent?

31%	Looking to increase it a lot
33%	Looking to increase it somewhat
28%	Staying about the same
3%	Looking to decrease it somewhat
0%	Looking to decrease it a lot
5%	Not sure yet

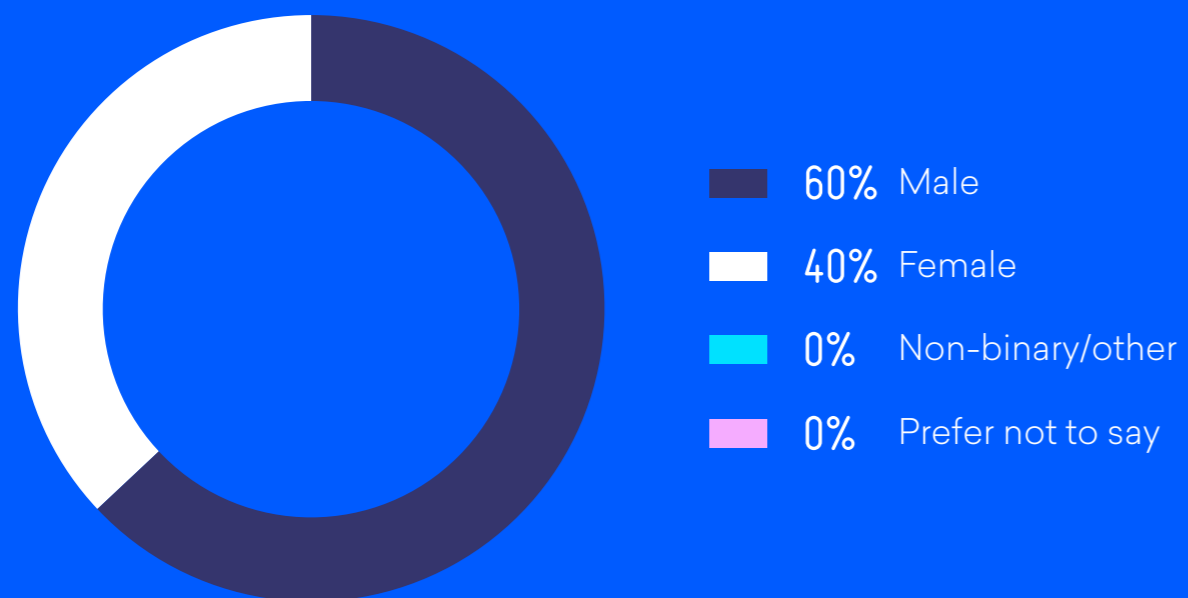The pandemic also revealed the importance of knowing which services are essential within your company.

Top 5 positions that are essential in times of crisis

1. IT consultant

2. Cybersecurity expert

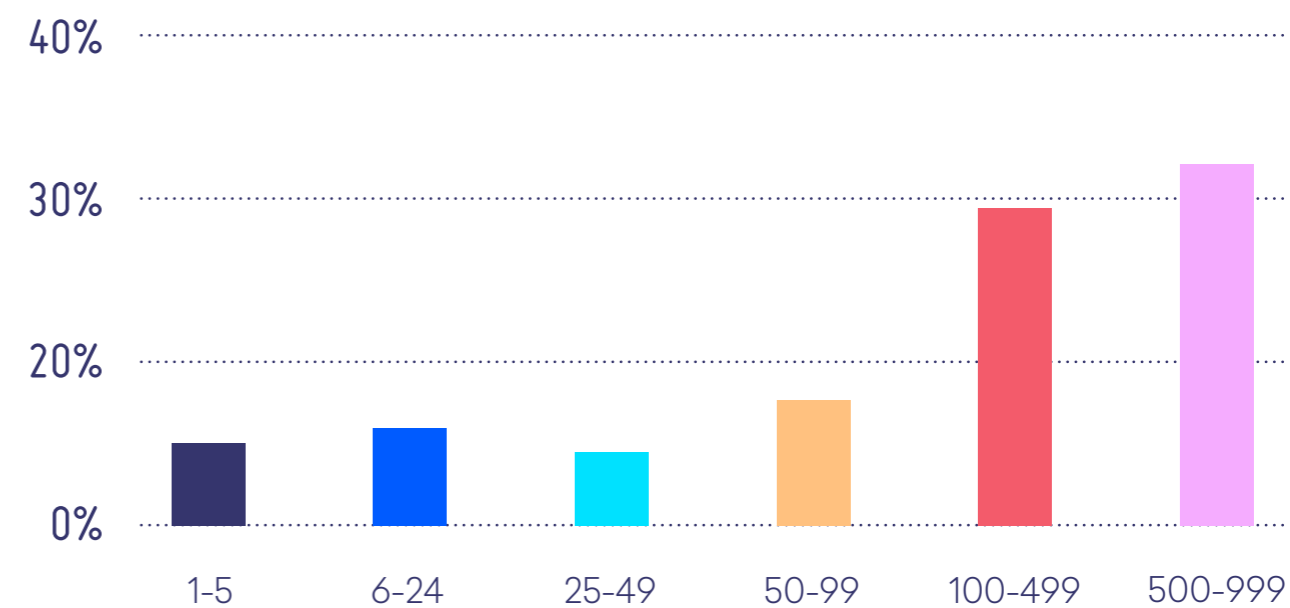3. Software engineer

4. Cloud architect

5. Health IT specialist

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Demographics

I identify as a:

- 60% Male
- 40% Female
- 0% Non-binary/other
- 0% Prefer not to say

How many employees work at your current company (including yourself)?

Category	Value
1-5	
6-24	
25-49	
50-99	
100-499	
500-999	

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Methodology

An online survey was conducted among a panel of potential respondents. The recruitment period was June 17, 2020 to June 21, 2020. A total of 500 panel respondents completed the survey (excluding terminations and abandonments) from four countries: United States (250), India (150), Canada and the United Kingdom (100 combined).

There were four screeners for the survey to determine eligibility:

• 18 years or older
• Had to be a full-time employee
• Had to work at company with fewer than 1,000 employees
• Had to be a founder/co-founder of a company OR a decision
  maker as it relates to technology

The sample was provided by Market Cube, a research panel company. All respondents were invited to take the survey via an email invitation. Panel respondents were incentivized to participate via the panel's established points program.

About Currents

Trends in the developer and SMB communities move quickly. As a developer- and SMB-focused company, it's vital to keep up with the technologies and tools these audiences are interested in so we can help them achieve their goals. Currents is DigitalOcean's seasonal report on developer and SMB trends that we created to share knowledge with the community.

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